AMERICAN ANNALS OF THE DEAF

Official Organ

Conference of Executives of American Schools for the Deaf
Convention of American Instructors of the Deaf

Edited by

IRVING S. FUSFELD

Under the Direction of

PERCIVAL HALL, of the District of Columbia, 1939
FRANK M. DRIGGS, of Utah, *ex officio*
MADISON J. LEE, of Kentucky, 1939
ELWOOD A. STEVENSON, of California, 1945
IGNATIUS BJORLEE, of Maryland, 1942
ALVIN E. POPE, of New Jersey, 1942
CLARENCE J. SETTLES, of Florida, 1945

Executive Committee of the Conference

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VOLUME LXXXI NUMBER 3

THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF

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THE CONFERENCE OF EXECUTIVES OF AMERICAN SCHOOLS FOR THE DEAF, originally the Conference of Superintendents and Principals of American Schools for the Deaf, was founded in 1868 and subsequently incorporated under the laws of the State of Maryland in 1931. The Conference is an organization of the executive heads of schools for the deaf in the United States and Canada, and has for its object "to promote the management and operation of schools for the deaf along the broadest and most efficient lines and to further and promote the general welfare of the deaf."

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THE CONVENTION OF AMERICAN INSTRUCTORS OF THE DEAF, founded in 1868 and incorporated by Congress in 1897, is an organization of [illegible] in the United States and Canada [illegible] of "promotion of the education of the deaf [illegible] most advanced and practical lines." [illegible] purpose "to encourage the harmonious union, in [illegible] action, of all persons actually engaged in the education of the deaf in America."

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AMERICAN ANNALS OF THE DEAF

Precept and Example

By CLYDE CARTER
Instructor in the Arizona School, Tucson, Arizona

A TEACHER, looking into the bright, eager faces of the boys and girls of her class, cannot but feel the joy of service and that to be able to guide them in their young lives is a privilege as much as a responsibility.

Money is not all a teacher obtains for her service, for a greater satisfaction comes from the knowledge that she has been able to direct an eager, growing young life that relies upon her and is reaching out to her superior attainment. While instruction is given from texts, a teacher in her own life, in her own character, in her own personal habits is constantly impressing her pupils by lessons equally important. There is a subtle personality emanating every day and it has its effect upon each one of the children. A teacher cannot afford to overlook this unconscious teaching and should try to mold her own life to make it worthy of example. Even a young child can probe the sincerity of character, and he can soon distinguish the violation of precept by example.

Should a teacher stress neatness, she should be neat herself and her schoolroom should be orderly and things put in their proper places. An orderly schoolroom is restful and children work better where there are poise and quietude, even in the most crude appointments. A teacher's work on the board should be done carefully and with the constant reminder that a picture is worth a thousand words.

Children should be taught the value of school property and to avoid wasteful and destructive habits. A book should

be treated as a friend and a child should never be allowed to think that because it cost him nothing no one pays for it. If a teacher turns a book back to back, stuffs it full of papers and is careless in handling it, she is teaching a far more graphic lesson by example than she is by precept. A deaf child being so well supplied in a residential school cannot have a true sense of values and it is very necessary that a teacher be careful in the use of school property and show no wastefulness in the giving out of school supplies.

Promptness is a saving grace and a deaf child should learn its value early. If a teacher is late, and careless about time, children will fall into slipshod ways which will mar their success in any business they may choose to follow.

Poise and good manners pay no better dividends anywhere than in the schoolroom and a class will absorb these readily from a teacher who has them in her bag of tricks. They pay richly and the result is seen in a class contented in its work and eager and enthusiastic for new things. A child is a marvelously delicate thing and one can vibrate his very heartstrings. As we breathe air, so a child breathes the true character of a teacher and the unconscious emanations are molding and shaping his destiny in the very heart of his being. He is building for life, and in the stones he is laying, the teacher's personality is mixing with the mortar and sand. One must think of this not with a terrifying responsibility, but with joy and thankfulness that he can be helped.

A child loves beauty; he works better where there is a bright spot and where there is harmony in color. A flower, a picture, a vase satisfy this hunger for beauty and a room where there is beauty in material, is bound to show beauty in achievement too. Give the child something to admire and his heart will reach out to those things that are fine and true.

A teacher should be kind in her relations toward all persons about the school. She should be careful about criticism and by her attitude teach those fine lessons of tolerance and fair play. Deaf children especially need lessons in their social relations to others and they must have training in gracious manners and a desire to please. To make up for deafness they need an approach to people; they need good manners and

attractive ways. No matter how much ability they possess, they need agreeable, pleasing manners to open the door. They must be taught to think less of self and to give more to make the scales balance. Adjustment to world conditions is increasingly difficult, and pleasing, gracious manners must be stressed if they succeed. Nowhere can they learn these lessons so well as in the classroom and just those traits of character we teach in precept we must teach in example.

Soon these children will be thrown into the rushing river of life. They will be tossed like foam upon its turbulent bosom but into its quiet shoals they will carry some impress of the teacher. One must be careful of what is given them now. Years will dim the knowledge imparted but the character the teacher's example helped to build will be an integral part of their success or failure.

Perfection is never to be expected in a teacher but she should feel a sense of responsibility in the practice of those solid virtues of behavior which make so much for happiness in after life. Deaf children more than hearing children are impressed by the character of the teacher. Qualifications in education and training are looked into carefully, but many teachers pass these tests only to fall down in those finer qualities which shape the destiny of their pupils. A schoolroom is a severe test laboratory and only character will stand the strain and give its beauty and stamina to these rich, expanding lives. Example strengthens precept and is a thousand times the more effective teacher. A teacher may qualify in training but still be lacking in certain characteristics which back the precept by the force of example. Teachers should not indulge in so many "ism's," one educator says, and we will add that to fortify precept by example it is better to practice the "am's."

Cubbing for Younger Boys

By R. O. WYLAND, Ph.D.
Director of Education and Relationship,
Boy Scouts of America, New York City

FOR MANY years past, teachers in schools and homes for the deaf have been welcoming and utilizing the Scout Program for the benefit of the partially handicapped boys in their charge, but perhaps fewer of them know of the equally available and worth-while program for younger boys, known as Cubbing, which is now being enthusiastically carried on all over the country, also under the auspices of the Boy Scouts of America.

Cubbing is for the boy of nine to twelve, not old enough yet to be a Scout but needing quite as much as his older brother, happy, wholesome outlets for his surplus energy, suggestions for games, projects and hobbies suited to his years, incentives to self-advancement, physically, mentally, and morally.

Its program is made up of things boys naturally do in any case, playing, doing "stunts," building things, making things, a wide range of activities, from which the boy may choose what interests him most at the moment, moving on to other games, projects and hobbies as his body develops and his mind and taste seek new avenues of expression. It is largely elective, but is so devised that in order to climb his "Achievement Ladder," pass from Wolf Cub rank to Bear and Lion, and eventually into Scouting, he must choose increasingly difficult tests of his growing powers, develop in strength, skill, agility, initiative and power to assimilate experience.

Health and safety are important factors in all this. The boy is encouraged to check up on his own health habits, know the why's of hygiene as well as put it in practice. "The Cub watches to grow stronger," is one of his principles. He knows the rules of safety also, watches his step on street and in traveling, keeps his eye out for younger children, so that they may run no risk.

"The Cub helps a lot" is also a vital mainspring in Cub-

bing though his helpfulness is confined naturally to a smaller sphere than the Scout's. He learns to keep his room in order, his clothes neatly hung, to share home duties, take on little extra tasks, do some neighborhood job, like raking up yards, bring in kindling for somebody, doing errands cheerfully.

This attitude goes over into other relationships in school and playground just as his Laws, "A Cub does his best" and "A Cub is square," "A Cub gives good will," have their effect in whatever he is doing, make him a more responsible, better socially adjusted individual.

The *Den,* the small unit in Scouting, is home and neighborhood centered. Its leaders, in the background, are parents, with Cub sons active in the Den. Its active, on the spot, boy leader is the *Den Chief,* a Scout appointed from some nearby Troop to help the Den "go" and "grow," two points that are vital in the Cub plan. There is also a *Denner,* a Cub of the group, who is a natural leader, whose position is similar to that of a *Patrol Leader* in Scouting. Several Dens together make up a Pack under an adult leader known as a Cubmaster. The Pack, like the Troop is under the sponsorship of a church, school, service club or any responsible group, so that permanency as well as suitable supervision may be assured.

Naturally in applying this plan to institutional use some adaptations would be necessary. The Den, the natural play group of a neighborhood, would be the natural pre-Scout age play group of the school, functioning similarly, playing games, undertaking projects such as building a Den shack on the premises, making nature museums, collecting stamps, devising secret codes, going in for simple handicraft in wood, clay, leather—whatever is suitable and interesting to an individual or to the whole group.

The *Cub Handbook* and the *Cub Leaders' Round Table,* the monthly magazine, published by the Boy Scouts of America, provide a wealth of ideas along this line, almost all of which could be used to good advantage among boys who are handicapped by poor hearing but normal in every other way. Indeed, such boys perhaps are especially in need of just such self-expressive activities, inasmuch as it is only too easy for

"differentness" of any sort to encourage inferiority complexes or lend an excuse for lack of initiative and effort. The thoroughly happy child is the busy child and in Cubbing there is plenty to keep every youngster anywhere, under any conditions, constructively occupied and "growing."

Perhaps to many of you the leadership problem will seem the chief obstacle. You may be already using Scouting to the fullest extent possible under the circumstances and in so doing may have absorbed all your available leadership. If this is the case, why not let your older, more responsible Scouts do the active leading, serving as Den Chiefs? It will give them a new interest and a chance to learn by doing in the practice of Den management. Boys, as a rule, make good leaders of younger boys. They know what youngsters like, what they can do, what will seem worth working for to them.

The adult supervision need not be too great a task under this arrangement, and if there are parents of the boys, near enough to come occasionally, acting as Den Mothers or Den Dads, the set-up will be practically the same as for a neighborhood group. The local Scout Executive in your community will give you any information necessary as to procedure for starting a Den or Pack.

Once under way, Cubbing practically goes on its own steam. It is real "boy stuff" and the boys will run it themselves to an astounding degreee if they once get the idea. It should provide new interests, new incentives, wider opportunities for self expression, increased happiness and social adjustment, greater assurance that one handicap need not make one seriously different from one's fellows, but should on the contrary provide impetus to excel in other lines than those physically tabu. Cubbing is a joyous adventure in living-fun fellowship and worth-while things to do. Isn't that what every youngster wants and has a right to have? Try Cubbing for your younger boys. In modern lingo, it's a "natural."

Status of Scouting in American Schools for the Deaf

By L. R. DIVINE, E.E.

Superintendent of the Louisiana School
Baton Rouge, Louisiana

THE Boy Scout movement is a most significant educational contribution to our time. The naturalist may praise it for its success in putting the boy close to nature's heart; the moralist, for its splendid code of ethics; the hygienist, for its method of physical training; the parent, for its ability to keep his boy out of mischief; but from the standpoint of the educator, it has marvelous potency for converting the restless, irresponsible, self-centered boy into a straightforward, dependable, helpful young citizen. To the boy who will give himself to it, there is plenty of work that looks like play. As soon as he qualifies himself a Scout, he can appreciate high standards of excellence, rules of conduct which he must obey, positions of responsibility which he may occupy. In other words, Scouting is a program that appeals to the boy's instincts, with a method adapted to a boy's nature.

Scouting has found fertile ground among a large number of American schools for the deaf and these scouts manifest a keen interest in all of the scouting activities and requirements.

Inquiry was made of the executive office of the Boy Scouts of America, in New York City, as to the number of deaf boys who were registered scouts. Communications from that office stated that it had no statistics to this effect.

Because of the lack of this valuable information, which in time should be of service, a questionnaire was sent to all the large residential schools in the United States. For three years this data has been gathered and for the benefit of those who are interested in this type of education and for a matter of record, the following statistics are offered, derived from the answers to the questionnaires. Where no figures are recorded, the question did not appear on the inquiry blank for that year.

TABULATION I

INFORMATION ON BOY SCOUT ACTIVITY IN SCHOOLS FOR THE DEAF

Question	*Year* 1932-1933	1933-1934	1934-1935
1. Number of schools to which questionnaires were sent	52	46	51
2. Number of schools answering questionnaires	40	42	36
3. Number of schools having Boy Scouts	25		
4. Average number of boys in all troops reported	38		
5. Number of boys in entire scout body		942	831
6. Number of boys holding these ranks:			
Eagle Palm		15	7
Eagle Scout	10	31	11
Life Scout	30	53	43
Star Scout	46	104	63
7. Number of Scouts receiving unusual awards this year	14	1	1
8. Average number of years Scouting has been in schools for the deaf reporting	6	6.2	7.11
9. Do the older boys take as much interest in Scouting as the younger boys do?			
Yes	12	12	14
No	13	15	12
10. Do Scoutmasters and assistants receive financial or other compensation for services in this work?			
Yes	5	1	1
No	19	26	26
11. Number of schools giving financial assistance to their troops	12		
12. Does your troop receive any financial or other help from the school?			
How much or what? No		13	9
Books, occasionally for hikes, dues, etc. Yes		14	17
13. Schools furnishing uniforms to their Scouts:			
Part of uniform	1		
All of uniform	10		
14. Does the school furnish any part of the Scout uniform?			
Yes		6	
No		21	20
15. Does the school furnish any part of the Scoutmaster's uniform?			
Yes		6	2
No		24	24

Question	*Year* 1932-1933	1933-1934	1934-1935
16. Do deaf boys profit as much as normal boys in Scouting?			
Yes	18	20	19
No	5	9	7
17. Are your committeemen selected from within the school?			
Yes		7	20
No		22	6
18. Is your troop sponsored by a civic club or other organization?			
Yes		20	6
No		7	21
19. Number of troops receiving the President Hoover award		12	
20. Number of troops receiving the President Roosevelt award		9	
21. Did your troop receive the Ten-Year Program award?			
Yes			11
No			16
22. Do you have your own Court of Honor or do you affiliate with the local Court of Honor?			
Own Court of Honor			4
Local Court of Honor			22

TABULATION II

INFORMATION ON GIRL SCOUT ACTIVITY IN SCHOOLS FOR THE DEAF

Question	*Year* 1932-1933	1933-1934	1934-1935
1. Schools having Girl Scouts (as against 25 schools having Boy Scouts—40 schools reporting)	17		
2. Number of girls in entire scout body		512	488
3. Is your troop active according to outline?			
Yes		17	19
No		1	
4. Does your troop work with local troops?			
Yes		8	12
No		10	7
5. Do Scout Leaders receive any financial compensation for their work?			
Yes		1	
No		19	19
6. Do you go on annual Scout camps?			
Yes		7	10
No		11	9

Question	*Year* 1932-1933	1933-1934	1934-1935
7. Are your leaders allowed to attend district conferences?			
Yes		8	13
No		11	4
8. Is your community committee active?			
Yes		11	12
No		7	3
9. Are your Scout Leaders appointed or do they volunteer their services?			
Appointed		9	7
Volunteer		11	10
10. Is your Captain allowed to choose her Lieutenant?			
Yes		15	
No		2	18
11. Are your Scouts ever excused from classes for outside scouting activities?			
Yes		5	8
No		14	10
12. Are your leaders people who teach in the school?			
Yes		18	16
No		1	1
13. Have your leaders the privilege of withdrawing from the troop any time they desire to do so?			
Yes		14	14
No		15	5
14. Schools do not have Scout troops or similar organizations		10	18

For the year 1932-1933 the average per cent of male pupils who were Scouts was 37.

The returns for the year 1933-1934 indicated:

1. Out of a total attendance of 3,907 boys in 24 schools, only 24.11 per cent were registered Scouts.

2. Out of a total attendance of 2,443 girls in 18 schools, only 18.77 per cent were registered Scouts.

Abreast of the Times in a Fourth-Year Class

By HELEN F. PUMPHREY

Instructor in the Lexington School
New York, New York

WHEN WE started our newspaper bulletin in September, I had no idea how dependent on the daily papers I was to become. Nor was I aware of the fact that in pictures of current events there lurked a possibility for teaching reading, language, geography and even arithmetic to ten-year-old deaf children in such an informal way.

One morning I found in one of the papers a very interesting picture of a doll show which was being given at Altman's. There were dolls from many lands. As I had planned to take my class to see the display, I felt sure that the interest would be all the keener if the pupils could get beforehand even a vague idea of what they were to see. Consequently, before they came to school I pasted the picture on a cardboard chart about twenty by twenty-five inches. I wrote beneath it in manuscript writing this statement: "There is a doll show at Altman's today. After awhile we are going to see it. There are dolls from many countries far away and I think you will like them very much." The chart was placed on a chart rack in the corner and was spied immediately by the first child to enter the room. In no time the whole class was crowded around this new attraction and asking all sorts of questions about it. Before school started I had written on the board for reference the names of the countries which were represented by the dolls in the picture. Children seem to have a natural fondness for maps and for finding places of interest on them. With a little help from the teacher these youngsters were able to find France, Italy, England and Austria on the globe. Previous to this I had tried to introduce by means of pictures, stories and maps the fact that there is a world outside the one they know. Needless to say, the pupils enjoyed the trip to Altman's very much and I felt a very definite knowledge of language as well as geography had been gained. When we got back to school

the boys and girls made another dash for the paper to compare the pictures of the dolls with the ones which they had just seen. Then they found the different countries on the globe again—this time of their own accord.

As the days went by, other pictures appeared in the newspapers which were interesting not only to children but to grown-ups as well. And as these were added to the class bulletin, I realized that another great newspaper had been founded. Great to class $2B^2$ at least!

This work has stimulated a very real interest in current events on the part of the children. Hardly a day goes by but some child in the class comes in with a picture to be added to the collection. Not that the pictures are always the type that one would want a child to see. With the cheap tabloids in circulation it is inevitable that on occasion a pupil will bring in undesirable pictures. Several times this has happened in our class. The children have looked a bit puzzled and hurt, it is true, when I explained that these things happen but that we don't like to dwell on them and consequently wouldn't want to put them on the paper where we could see them all the time. For example, at the time that King Alexander was assassinated one little boy brought in a paper filled with pictures of the king as he lay dying and also pictures of him in his coffin. The children also seem fond of gruesome details of murders and kidnapings. I feel, though, that the children are gradually getting to the point where they themselves can discriminate between news that is interesting and that which is merely sensational.

The types of stories which seem to gain interest most easily are those relative to animals or the lives of other children. One day the pupils were intensely interested in the picture and accompanying story of a new tiger that had just been brought to this country and placed in the Bronx Zoo. This made an excellent topic for the paper. An equal amount of interest was shown in another picture, the account of the adoption of two children by Mayor and Mrs. LaGuardia a short time before.

Frequently the language which is used in some of the topics is much above the heads of the pupils as far as their own ability to use it is concerned. For instance the word

"adopted." When they came to this word on our paper, someone instantly wanted to know the meaning. I told the class that the real father and mother of the two children were dead and that now Mayor and Mrs. LaGuardia were to be their new father and mother. They wanted the boy and girl to live with them and so they had *adopted* them. This seemed to make clear the meaning of the word. Later on I had occasion to use the same word when I found the picture of a cat which had adopted a German police puppy. It was quite obvious that the cat was not the pup's real mother but merely acting as one. The youngsters had no difficulty in understanding the sentence, "This cat has adopted a six-weeks-old puppy for her baby." They even turned back to the page about the LaGuardia children and showed me that the word was the same.

Occasionally I leave the footnotes under the picture. Some of the pupils seem to have the faculty for picking out the word which at a glance seems to have the remotest connection with the picture. I must confess that I've known moments of panic. One day there were visitors in the room as we were reading an article about the Dionne quintuplets. We were looking at a picture of them and their dolls which some eager person had given them as a premature Christmas present. I had made the mistake of not removing the description below the picture. In the topic which I had written on the chart I had also neglected to mention the fact that the dolls were a Christmas present. I was far more interested in the fact that the dolls looked very much like the babies and that they were about the same size, and this was the gist of the article on our own newspaper. As we were grouped about the paper busily separating the dolls from the babies and counting them, one sharp-eyed little girl saw the word "Christmas." She wanted to know at once why this was printed below a picture of the quintuplets. For a moment my brain was numb and I was at a loss to know how to get out of the situation. Then I suddenly remembered that the week before the supervising teacher had given a lesson in our class and had chosen "Presents" as the subject that day. She had even gone so far as to give a simple birthday gift to the teacher, to the intense curiosity of the whole room.

Later the children had written of their own experiences in receiving gifts. I harked back to the incident and they were well able to recall it. Then I told them that some person had wanted very much to give the quintuplets a present, too, and so he had given dolls to them for an early Christmas gift. This explanation seemed to content the child who brought up the point.

I have been pleased to find the boys and girls getting help in expressing themselves both orally and in written form by referring to a particular article in the bulletin for a certain word which they remembered having been used there.

The pupils seem to take great pride in the newspaper and whenever a visitor comes they always want to share their own enthusiasm by showing the topic in which they themselves are most interested.

Following are examples of stories which have been used:

This is a picture of the new English boat. It was built in England. The name of the boat is *Queen Mary*. It is the largest ship in the world now. Perhaps you will see it when it comes to New York.

Here is a picture of a baby pony. Did you ever see a young pony? This one lives in St. Anthony, Idaho. It is standing by its mother.

Yesterday the King of Jugoslavia was killed in France. Here is a picture of him. He was riding in his car and a man jumped on the running board and shot him. His name was King Alexander.

The new king is only eleven years old. His name is King Peter. He goes to school in England. Isn't he a little boy to be a king?

Topics about the new king occupied our paper for a few days as the children continued to bring in pictures relating to the incident.

Other topics follow:

Look at this baby elephant being put in an airplane for a ride. He didn't want to go and these people had to work very hard to get him there. See them pushing him? His name is Toto. He flew from New York to St. Louis. He will live in the zoo in St. Louis.

Here is a picture of many boys and girls sailing their boats in the Central Park lake. They had a race to see whose boat would go the fastest.

See this little boy. He is four years old. His father has been in Little America with Admiral Byrd for a long time. The boy's name is Francis Black. He is shown here with his grandmother as he talked to his father on the radio the other night. He said, "Hello, daddy. Bring me a great big dog when you come home."

Whenever there is other than local news, we always spend time looking up these places on the map or on the globe.

Pictures of the following subjects have lent themselves very well for this type of work:

America's Prettiest Baby
Europe's First Sleeper Airplane
Girl Immigrants from Czechoslovakia
The Japanese Flood
A Dog in Court (being tried for biting a little girl)
A Chimpanzee Giving a Real Baby His Bottle
Cats From the Cat Show
An Owl Which Flew into a Downtown Office out of the Rain
The New Tiger in the Bronx Zoo
A Dog and Three Little Girls Whose Lives He Saved
Giant Mickey Mouse Which Led the Macy Thanksgiving Parade
The Quintuplets
Princess Elizabeth and Her Sister on a Hobby Horse
The New Stream-lined Train
Wiley Post's Record Flight from California
Events at the Horse Show—Northwest Mounted Police, etc.
Boy Scout Rally
Airplane Race to Australia

I was amused one day at one of my boys. I hadn't written of the airplane derby to Australia because I didn't think it would be of particular interest to the class. But this child came in with a stack of pictures of the race which he had found in a newspaper downstairs and he wanted to know just why nothing had appeared on our own newspaper regarding it. Of course I tried to cover up the breach by preparing an article as quickly as I could.

It is surprising to go to the movies at the end of the week and see so many pictures in the news reel which have been shown on our paper during the week. Several times the boys and girls have come back from a week-end at home and told me in quite an excited fashion that they had seen one of our own pictures in the movies. It makes the news far more personal to the child and certainly he has been helped to understand some event which possibly would have meant very little to him otherwise. It seems to me that these results are well worth the time spent in this work.

The chart racks mentioned were made by the boys in our school and have been found most convenient. A description follows: There are two wooden stands about 50 inches high with grooves in the top of each, in which a pole is fitted. Large brass bookrings are placed on the pole for the charts to hang from. This makes it very easy to turn through the charts without removing any of them. There is a brace between the stands about twelve or fifteen inches from the floor. This leaves a space between the pole and the brace in which the charts are hung.

The Infinitive of Purpose

By Alan Y. Crouter
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Analyzing a sentence containing an infinitive of purpose and breaking it down into two short sentences, we find that there are two distinct actions described, *viz,*

John went to the closet to get a pencil.
1. John went to the closet.
2. He got a pencil.

Quite logically and necessarily the action of the first sentence precedes that of the second. This is always so, and its constancy is indeed fortunate.

We now have a concrete fact, and the next step is to present it to the pupil in a way that will enable him to grasp it as easily as possible.

This article does not pretend to dictate the grade in which, or the conditions under which, the principle should be introduced. At our school we find it wise to make sure that the pupil has a thorough practical understanding of the "because" clause. We also feel it advisable to introduce the principle in the past tense.

Such being the case, the class is called on for statements containing "because" clauses. These are given orally, and then written on a slate. Before long the supply is exhausted and one like the following is offered: "I came to school because I learn." We have deliberately invited the pupil to make this mistake, but at the same time we have set the stage for our "show."

The pupil is told to write the statement on a slate, and then, with the rest of the class, gently informed that it is incorrect. The teacher then tells the class that she knows a new way to answer the question, "Why.....?" and that she will teach it if, perchance, the class is interested. Suffice it to say that there is sure to be an assuring chorus of eager voices. The teacher then gives the proper construction orally, and it is written on *another* slate, *viz,*

I came to school to learn.

The next question to be asked is, "What happened first?" "What did you do first?" The answer wanted is, "I came to school." When this is obtained, a line is drawn under that portion of the statement, and only that portion. The numeral "1" is written over it, *viz,*

1
I came to school to learn.

Perhaps we have in the class a pupil who encounters difficulty in getting this mental picture. To help him, let us break down the statement in a logical and chronological order, as follows:

1. I came to school.
2. I learned.

Let us then call on the pupil to tell which action occurred first. Ninety-nine times out of 100 he will point to the first statement. It is an easy step then to show him the relation between the two separate statements and the single one.

In the event that the pupil does not comprehend clearly the sequence of events, even after the statement has been broken down, action work is the only solution. Action work, and more action work must be given, until the pupil acquires the idea.

An objection may be made to the introduction as outlined on the ground that it is poor psychology to lead the pupil to make a mistake. For one who is so inclined the following plan can be used.

The teacher writes on a slate two short statements which, when combined, form a single statement entailing the use of the infinitive of purpose, namely,

1. John picked up some sticks.
2. He made a fire.

The teacher then asks this question: "Why did John pick up some sticks?"

A pupil using a "because" clause correctly or incorrectly may make a statement. This is not written on the slate, nor is the originator subjected to criticism. He is merely told that his contribution is incorrect and quietly allowed to continue concentrating on the matter at hand.

A bright youngster may give the proper construction as a

result of having seen it on the lips before, although not understanding it. If so, the statement is written on the slate and the work goes on as previously related.

The chances are very strong that no one will make the proper statement. In this event the procedure is that of the first plan, and the interest of the class is stimulated by the knowledge that new language is to be given.

The only way the teacher can tell whether or not the pupil has an understanding of the principle is to have him apply it. To bring about this end we call upon the class for original statements. This type of work is continued until each and every pupil can walk to the slate confidently and write his statement with an air of assurance.

We must now contrast the use of the infinitive with that of the "because" clause. This employs the use of two slates. At the top of one slate, "because.....," is written. The caption on the other is "to....." These slates should be side by side so that the contrasting statements may readily be observed by the class.

The teacher asks for a statement employing the use of the new language just learned. For the sake of discussion, let us suppose that the following is given: "I saved my money to buy a watch." This is put on the slate bearing the heading, "to.....," as illustrated. The proper part is underlined and numbered. It is wise to have all the children contribute so that their minds are focused on the fact that the action which takes place first is described in the first part of the statement. Perhaps our two slates look like this:

because.....	to.....
	1. I saved my money to buy a watch.
	2. I went to the hospital to see my mother.
	3. My father gave me some money to buy some candy.
	4. We went to the dining room this morning to eat our breakfast.

1
5. My brother works hard to earn money.
1
6. Leonard climbed a tree to get some apples.

The teacher now asks for statements with "because" clauses in them. Perchance she gets: "Mary went to the hospital because she was sick." This is placed on the "because" slate, and the pupil asked to draw a line under, "what happened first." If he does so, it looks like this:

Mary went to the hospital because she was sick.

The class should be forcefully impressed with the fact that in this statement the first of the two actions narrated is in the last part of the statement. Before long our "because" slate is filled with statements which should be properly marked as shown here.

because.....

1.Mary went to the hospital
1
because she was sick.

2. I bought a new pair of shoes
1
because I needed them.

1
3. Betty cried because she hurt her arm.

4. John's mother scolded him be-
1
cause he broke a dish.

1
5. I was tired because I played very hard.

The two slates now offer a ready contrast of the two principles, and the class is allowed to write additional statements on either slate. This step is a crucial test and indicates whether or not the class has the "feel" of the difference between the two principles.

We have dealt with the infinitive of purpose solely in the past tense. Before we leave it, we must insure its correct use in the present and future tenses. The sequence of actions is the same in these tenses as in the past. It is highly probable that the pupils will naturally use the principle correctly in these tenses without formal presentation. However, if difficulty is encountered, the question, "What will happen first?" or "What happens first?" is asked, and the proper part of the statement is underlined. This enables the pupil to see the similarity in sentence construction.

The pupil can now intuitively use the proper construction when answering the question, "Why.....?" So far he has been taught only the long, formal answer. To meet his need for idiomatic expression it is only fitting that he should be taught the shorter forms used in everyday conversation, namely,

1. *Question*—"Why were you late this morning?"
   Answer—"Because I went to the hospital."
2. *Question*—"Why did you go in the house?"
   Answer—"To get my coat."

This method for teaching the infinitive of purpose has been applied in several of our classes. The results have been most satisfactory. No dull repetition has been necessary. The principle was readily grasped and the children are now using it spontaneously.

A Key to the Language of Arithmetic—An Aid in Teaching the Fundamental Processes

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THE NEED for better methods of putting across facts to children is always present. Every teacher hopes to give her pupils full benefit of the time spent in the classroom. With this desire, she seeks aids to simplify her work. She must take the help of others, or invent her own system.

There is opportunity for real interest in arithmetic. It involves so many other forms of learning, such as reading, language, spelling and penmanship. What more could one ask to develop enthusiasm in one subject? Of course, one must not forget the mechanical side of arithmetic which tends to make the subject one of drudgery.

Among the many aids in arithmetic, there is what has become known in our department as "The Key to the Language of Arithmetic." At least, that is what it is termed. It includes a study of the signs, names of the signs, what we do, what we find and the four processes. These titles are printed horizontally on a strip of paper a foot long and three inches wide. The paper looks like the following:

Signs	Name of Signs	What we do	What we find	Name of the Processes

These strips are passed out to the class. With a previous study of the processes and the language involved in teaching them, the pupils should be capable of filling out this key. That is, they should be able to put $+$, $-$, $\times$, $\div$ under the "Signs" column; plus, minus, times and divide by (division sign) under the "Name of Signs" column; add, subtract, multiply and divide under the "What we do" column; sum or amount, difference or remainder, product and quotient under the "What we find" column; and lastly, addition, subtraction, multiplication and division under the "Processes" column. If the pupils cannot do this they need further study

of the processes. One would not expect a second-grade child to know more than two processes. They could not be expected to fill it out entirely. But they should be able to fill it out according to what is given in each grade.

As they review, they are able to write the terms used under the respective columns. When it is mastered it leaves a lasting picture in their minds. Further use of the language in teaching arithmetic is needed. In time they will understand what is meant when they have written problems. In asking oral questions the class will know what process is to be used in solving the problems.

Questions can easily be made out and understood better by the children. For example, a question may be, "What do we do to find the sum?" The child will look at the key, and see what should be done to find "the sum." The term "The sum" is on the same line as "add," and "add" comes under the "What we do" column. This is bound to help the class understand the language used in arithmetic. Other questions may take the following forms:

1. What do we find when we add?
2. What do we find when we subtract?
3. What do we find when we multiply?
4. What do we find when we divide?
5. What do we do to find the sum?
6. What do we do to find the difference?
7. What do we do to find the product?
8. What do we do to find the quotient?
9. Make the plus sign.
10. Make the minus sign.
11. Make the times sign.
12. Make the division sign or the sign that means "Divided by."
13. What do we do when we see the plus sign?
14. What do we do when we see the minus sign?
15. What do we do when we see the times sign?
16. What do we do when we see the division sign?
17. What is addition?
18. What is subtraction?
19. What is multiplication?
20. What is division?

21. What is the process of finding the sum or amount of two or more numbers?

22. What is the process of finding the difference between numbers?

23. What is the process of finding the product of two numbers?

24. What is the process of finding the quotient of two numbers.

25. What is the process of uniting two or more numbers to make one number?

26. What is the process of finding how much more one number is than another or of taking one number from another?

27. What is the process of increasing one number so many times another number?

28. What is the process of finding how many times one number is contained in another number?

Another helpful use of the key is in application with drill cards. Before starting to flash the cards for the various processes, the teacher may point to the sign on the card, saying, "What is this sign?" Then she may ask orally "What are we going *to do?*" After that has been satisfactorily answered, she may ask "What are we going to find?" The instructor or a pupil may write these questions on the blackboard with answers given by the class. As soon as she has completed the process of flashing the cards, she may turn to these questions, and ask, "What *did* we *do?*" The answer would be in the past tense and should be written under the question. Then she may ask, "What *did* we *find?*" A teacher with originality may find other uses of the key.

Recently the writer made a chart containing these statements: The sum of ——— plus ——— equals ———. The difference between ——— minus ——— equals ———. The product of ——— times ——— equals ———. The quotient of ——— divided by ——— equals ———. In the blanks little pockets were made to hold numbers which are printed on small pieces of cardboard. This chart provides excellent drill on the processes, and helps teach the language necessary to understand them.

In any way the key is used, it finds its place in the classroom, and surely will be an aid to any instructor in arithmetic, from the lower grades to high school.

Summary of Four Years' Experiment with Preschool Deaf Children at the Illinois School for the Deaf

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INTRODUCTION

IN RECENT years the need and importance of the education of the preschool-age deaf child has been widely discussed and recommended by educators of the deaf. The committee on Research on the Deaf and Hard of Hearing from the National Research Council expressed the problem thus:

> It is the feeling of this committee that the school should be effectually a nursery school with emphasis upon young children. A study of the effect of deafness upon the personality and social relations of young deaf children . . . and their mental development. . . . This committee also feels that in connection with the study of methods of training the young deaf child a survey of play activities among them should be made, both from the standpoint of the present activities in which such children engage and the possible activities in which they might engage. A study should be made of the types of activities in which young deaf children spontaneously engage, the educational value of such activities and the manner in which such activities can be made to have greater educational value. We no longer look upon play as wasted effort. It is now considered a vital and significant part of the educational processes and many of our modern procedures for handling young children are based upon modifications of play situations and play devices.

In an effort to ascertain the value and advantages of such early training to the deaf child the Illinois School for the Deaf established a preschool department in the fall of 1929. When this study was undertaken, no general information was available on the education and training of the preschool-age deaf child. There was, however, a great deal of material on the training and development of the hearing child of nursery and preschool age. Some of this material gave valuable information and help in the study of the young deaf child. It was agreed by those planning the study and research that the Illinois preschool attempt to establish for each child an environment that makes for the best possible physical and mental development, motor and sensory con-

trol and co-ordination, satisfactory development in speech, speech-reading, reading and writing, and to establish desirable habits. Additional objectives included independence in taking care of his own person and own wants, good social adjustment to the other children of his age and the elimination of undesirable habits of various sorts. Special attention was given to studying some of the problems expressed by the National Research Council, and such other problems as the need for information on the advisability of early training, the advantages to a child of such training when entering school, the method of teaching the preschool deaf child, and the best age for acceptance in the Illinois School. The measurable difference in the development between a preschool deaf child and a hearing child was studied.

A vital question which later years will have to answer is what effect preschool training will have on the deaf child's scholastic attainment over a period of years and on his later development in making his adjustment to normal living.

The number of cases included in the study was 50 preschool deaf children, 50 deaf children entering school for the first time between six and seven years of age, and a control group of 25 preschool-age hearing children. Some of the results of the study were compared with available material on similar studies of hearing children of the same age.

Pupils and Living Conditions

The Illinois Preschool Deaf Department was opened in the fall of 1929 with six selected pupils ranging in age from 51 months to 62 months and coming from various types of homes throughout the state. These pupils were housed in the same dormitories and followed the same schedules as the regularly accepted pupils. This arrangement, however, was found to be undesirable as the needs of these young pupils, which differed greatly from those of the older children, were not adequately met. During the spring of 1930 many applications from all over the state had been received from pupils ranging in age from 41 months to 60 months, so in the fall of the second year, 1930, it was deemed advisable to hold the preschool in a cottage removed from the main

plant. The group was enlarged to fourteen pupils, an assistant teacher secured and a schedule adopted which was planned particularly for young children.

The atmosphere of school was replaced as far as possible by a home environment with a learning atmosphere. The two-story cottage contained a living room, dormitories for fourteen pupils, accommodations for a teacher and a house mother, two activity or class rooms, a dining room, kitchen, and baths. The furniture and furnishings were chosen so as to appeal to young children. To foster the development of desirable habits real situations were utilized and the environment so organized that daily practice could be given through everyday activities such as dressing, undressing, bathing, getting ready for meals, play, walks, folding small blankets and straightening beds after naps, putting away toys and material, straightening the house after play, helping one another with difficult buttons, assisting younger children, and greeting visitors or strangers.

A large fenced-in play yard was equipped with apparatus appropriate to the age of the children and their mental and physical growth, such as swings, sand and accessories, ladders, turning bars, rings and creative material such as boxes, rope, tires, hammers and nails, etc. In addition to the equipment furnished, the children added their tricycles, wagons and toys brought from home.

The health of each child was considered of prime importance. The daily schedule was built around the young child's need for rest, activity and nourishment. The diet was planned and prepared for young children with careful attention to habits in relation to food. A lunch was served in the mid-morning and afternoon, the main meal at noon and supper in the evening.

The life of a deaf child is strenuous. He is constantly using nerve energy. He must concentrate on speech and speech-reading to "hear," he must be on the alert to see and feel what the hearing child receives more or less unconsciously. Consequently ample time must be provided for rest and relaxation. Unless the weather was too severe the children were out of doors every day. Sunsuits were worn when the weather

permitted. The morning schedule included an hour's play and walk every school day, followed by the noon meal. Sleep and play constituted the afternoon program for the younger children, rest and a half hour instruction for the five-year olds.

The entering age of the children ranged from 42 months to 63 months, the larger number falling between 42 months and 56 months. The average age of the youngest entering group, in 1933, was only 45 months. In 1934 the average age of the entering group was 55 months.

The children were from various types of home, some from broken homes where the mother worked, many were from rural districts, others came from homes of moderate circumstances, while still others were from homes cared for by charity organizations. The position of the child in its respective home ranged from the first born to the fifth born. The number of children in the family ranged from one to five, with fourteen cases of an "only child."

It is interesting to note that contrary to the generally accepted feeling that an "only child" is generally spoiled and self centered the cases of an "only deaf child" in this study have shown him to be less spoiled, selfish and self centered than the child with brothers or sisters who perhaps has been allowed to dominate his family because of his handicap.

The degree of deafness ranged from a total loss to very hard of hearing. Eleven cases gave the cause of deafness as unknown, twenty-two from diseases and seventeen were congenital. In nine cases there were other members of the family—parents, sisters, brothers or cousins—either deaf or hard of hearing.

Tests and Comparisons

Various types of tests and comparisons were carried out over a period of four years in order to ascertain as nearly as possible the mental development of a preschool deaf child, also to determine if possible the measurable difference in interest, play activities and personality development between a hearing and a deaf child of preschool age and of the same chronological age. Non-language tests and com-

parisons were used since the deaf child of preschool age has no understanding of language. These tests covered a range of subjects and activities.

Intelligence tests were given by psychologists from the Institute of Juvenile Research of Chicago. The Merrill-Palmer and the Non-Language items of the Minnesota Preschool Tests were given by the examiners to the pupils in the preschool department at the time of testing.

The results of these two tests tallied very closely. On the Merrill-Palmer only one tested under 100 I.Q.; for the Minnesota Preschool only four tested under 100 I.Q. The highest scores in both tests were made by the same boy, 129 on the Minnesota and 122 on the Merrill-Palmer. Pupils doing average and above in school subjects rated higher in these tests than those doing below-average work.

The Pintner-Paterson test was given to pupils who had had one or two years of preschool training. These pupils had not been given any previous tests of this nature. On this test pupils with two years training made higher scores and were doing better school work than pupils with only one year of training. The results compared favorably with the ability of the pupils to achieve in school subjects, with the exception of one boy rating 85 I.Q. who was doing very good average school work, and another boy rating 112 I.Q. who was doing poor work.

Personal Interest Tests were made by comparisons with a control group of hearing preschool-age children. The reactions of both groups agreed very closely. The interest in, and the reactions to, toys and material were practically the same. More concentration was shown by the young deaf children, probably due to the fact that they were not disturbed by outside stimuli.

Play activities in which young deaf children spontaneously engage were found to be practically the same as those of the same age hearing children. The deaf children used more pantomime and the hearing children speech, yet their mental development as far as the play development was concerned must have been very close to produce similar reactions. For instance, the deaf children enjoyed their

spontaneous, undirected activities of "reliving" their experiences of a trip to the barber shop, a bus ride, a trip to the park, playing school or house, a magician show, or the story of the Three Bears as thoroughly as the hearing children. The play activities of the two groups were noted while they played separately and not while they were playing together, which eliminated the possibility of the deaf children imitating the hearing children.

Choice of toys and materials and the time spent with them by the deaf children compared favorably with hearing children of the same age.

Play interests and responses showed definite progress for the three-, four- and five-year-old deaf children, in their choice of material and toys and the methods of handling them, and also a difference in their group activities. Each age development corresponded very closely to the development of hearing children of the same chronological age.

What conclusions can be drawn as a result of these tests and research with regard to the education of the preschool deaf child?

Do they not show the advisability of early training when the child's development is close to that of the normal hearing child? Psychologists agree that the first five years of a child's life are the most important. His mind is more pliable and develops more rapidly then than at any other period of development, and too, he is passing through the early stages of development, which mean so much to the mental growth of any child.

It is of vital importance, therefore, to maintain and develop in the preschool deaf child all those reactions and responses which are characteristic of his chronological age in order that he may progress more like the normal child as he advances in school work and social contacts.

Curriculum Activities

A preschool curriculum should consist of directed activities and not a formal course of study. If little children are to develop naturally along lines of normal maturation then each and every child should be given every opportunity for

individual growth and personality development. This realization has been the guiding factor during the years of research in the Illinois Preschool.

No two groups covered the same ground, no two children followed the same course in realizing an early education, but each group and each child worked out their own growth during the time spent in the department. This does not mean that there was a lack of organization or purpose each year but it does mean that the psychological moment was utilized to teach each child what he or she needed at that particular time whether it was speech, speech-reading, reading or writing.

The method throughout the four years has been based on the age and development of the pupils, their play instincts and their normal maturation for acquiring speech, speech-reading, reading or writing. Since practically all of the life of a young child is made up of play and play activities, these attributes have been the underlying principle of the methods used.

Children learn through the medium of play. They love activity for activity's sake. Creative activities, building with blocks, balancing, sliding, climbing and such muscular activity teach children initiative, self control, self confidence and muscular co-ordination as well as the rights of others.

Play is the most important occupation in life to a young child. It is through games and a play attitude that his mind is open, ready for stimulation, development and learning. Through play the child learns without a conscious effort of doing so. It is his inner natural urge for learning.

This play attitude is of vital importance, for a little child's span of attention is limited. It is short in duration and quickly changes from one thing to another. Wriggling, untiring, growing muscles have an opportunity to act when games and a play spirit are the method of teaching.

The educational value of activities and the manner in which such activities can be made to have greater educational value to the deaf child are obvious. The psychological time to give the young deaf child speech, speech-reading and the written or printed form of words and sentences is when

his activities require them, and he, within himself, feels the need to know. In "School and Society," John Dewey says, "The child is already intensively active and the question of education is the question of taking hold of his activities, of giving them direction. Through direction, through organized use, they tend toward valuable results instead of scattering or being left to merely impulsive expressions." C. S. Parker in "General Methods of Teaching in Elementary Schools" has this to say, "Utilizing children's interests is a business proposition, not a matter of sentiment."

If self activity is the basis of education and if what a child thinks and does educates him, then how he develops and learns depends largely upon the intelligent guidance of parents and teachers; and if it is what a child thinks and does that educates him then it should be most important to guide the young deaf child day by day into avenues of knowledge through his interests, and to see that his environment provides opportunity and material for a wide and varied growth.

The "S's" and the "R's" in the Education of the Deaf Child

Speech Speech-reading Sense training
Reading "'Riting"

The speech development of a hearing and a deaf child begins very early and along the same lines. The first effort at speech is babbling, which soon takes on meaningful words, then sentences. During the babbling stage the hearing child is constantly hearing language and comprehending its meaning. For the deaf child speech-reading and reading words and simple sentences give opportunity for language comprehension.

With both types of children the first period of babbling is very soon overlapped by the second period, verbalization or speech. The hearing child's speech develops by easy stages from constantly hearing speech but the deaf child must be guided and trained from the babbling stage to speech. A

young deaf child spontaneously babbles in a soft voice, natural in quality and pitch.

A large per cent of deafness occurs during early childhood and with this group of children speech training should begin very early so as to utilize the memory of sounds and to develop a muscular sensibility to help guide the actions of the speech organs. In many cases of deafness total loss of hearing does not occur at once and this gives the child a better chance to retain his speech habit and to keep it developing.

The method of teaching the young deaf child is practically the same as that for any child of six or seven years of age. From tongue exercises and placements for positions of elements through babbling exercises and syllables it is a natural step into words and sentences. Many words are spoken by some children four and five years of age from imitation before they have learned the position of all the elements contained in the words. A young deaf child of average intelligence should be able after two years of training to give most of the vowels and consonants.

Speech-reading or lip-reading should be associated with the daily experiences of the child, his toys, habits, activities and needs. His vocabulary is then built up informally through natural situations in connection with the activities of a child's life. From the actual experiences of everyday activities the child learns the meaning and when to use nouns, verbs, prepositions or other parts of speech. Although he does not know what part of speech the word is, he does know its meaning and when to use it, which is the important thing.

What might be called formal teaching of speech-reading has its value and place on the program. It is a fascinating game to a little child to sit or stand before attractive objects to be able to read the teacher's lips and to hold up the object named or to give it to another child. The average deaf child of four years of age can understand simple sentences very soon after he grasps the idea of speech-reading. Simple stories well told with pictures and dramatization are comprehended by the average deaf child the last half of his second year in preschool.

Sense training is another fascinating game. Many exercises are used to train the child's sense of sight for speech-reading and speech imitation, to train his touch for muscular sensitivity or feel and to stimulate his mind. Methods used with the preschool child are both simple and difficult, using both group and individual exercises. There is a great deal of available material such as: Montessori material, educational toys, and various material worked out by teachers. Kindergarten material and games are well suited for adaptation to the needs of deaf children and are unlimited in their possibilities for mental development, for developing attention, concentration, memory and observation.

Games develop an essential need in the child's development. They provide him with an immediate need, which is interesting and child-like, to use speech, speech-reading, or reading and writing of numbers and language. Games develop attention, observation, imitation, self control and the power to wait turns.

A child can learn to think and reason for himself when playing games, for his sense of responsibility and his judgment can be trained. By means of games and dramatization of pictures, stories and experiences the little child is laying a foundation for imagination and imaginative expression which are so often lacking in older deaf children. It seems hard for many older deaf children to enter into the "make believe" of normal childhood without some guidance in imaginary experiences in his earlier years when imagination plays so large a part in his development.

Hand work is included under sense training, reading and writing. It gives opportunity to gain muscular control of fingers and co-ordination between eye and hand which aid in the development of writing. It gives opportunity for reading words and simple sentences, to comprehend language, to follow directions. It also gives expression to the imagination. Very simple hand work is given the child of three and a half and four years of age, with many opportunities for undirected activities. The child of five is given a definite program carried throughout the year.

Reading is an interesting occupation to a little child when

pictures, objects and cards which he can handle and enjoy are used. With pupils under five years of age very simple exercises and games introduced in various ways and situations are used for recognition of words and comprehension of simple sentences. Letters from home mean so much more to each child after a word or sentence can be read and understood.

A five-year-old child reads sentences silently to follow simple directions with ease and pleasure, to find pictures from sentence descriptions or to find the sentence describing a picture. Another interesting exercise is building sentences from actions performed. Simple exercises in language and number work in work books such as "Number Fun," "Read It and Do It" and other Harter material, "Learn and Play" by Marion K. Smith are within the ability and understanding of the average five-year-old deaf child during the last half of his second year in preschool.

With very little work on the part of the teacher supplementary material may be worked out to precede any that may be a little difficult in the published work books.

"Riting" is an accomplishment which every normal child desires. Even before six years of age he scribbles and draws with pencil or crayola on any convenient material. An intelligent child of five and a half years can be directed through scribbling efforts into exercises leading to writing, provided he has had a year of previous training for muscular development and co-ordination of his finger movements. Writing as well as speech-reading and reading can be developed in advance of speech with the deaf child and gives him an opportunity to express his ideas and thoughts.

The vocabulary of a deaf child entering school at the age of six or seven is lacking unless he has had some previous training. He has practically no understanding of language as a means of communication with others. A preschool trained child enters school at the age of six years with a vocabulary and an understanding of languages as a means of communication through speech, speech-reading, silent reading and writing.

After two years preschool training a six-year-old deaf

child of average intelligence may have a minimum vocabulary as follows:

Speech—About 70 words including nouns, verbs, adjectives, prepositions; numbers to 5, some to 10; simple expressions; most of the elements, vowels and consonants.
Speech-reading—About 200 words including nouns, verbs, adjectives, prepositions, numbers, colors, question forms and expressions, etc.
Reading—About 250 words including the same parts of speech as for speech-reading.
Writing—According to the ability of the individual child and the length of time he has been in school; also the muscular co-ordination of the fingers.

Play Materials

There are two types of essential play material for young children; things which exercise the large fundamental muscles and things which stimulate mental activity. The Illinois Preschool Department was very fortunate to have an unusually large assortment of both types of material.

General Standards for All Types of Material.—The following principles should prevail in the selection of play materials:

1. Material should be as durable as possible.
2. Equipment should be made of such material that it may be kept as clean as possible.
3. Safety is a factor to be considered.
4. Large simple material will not cause strain to the eyes or muscles or cause nervous tension as the child uses them. At the same time it should not be awkward to handle.
5. The space in which the material is to be used is important.
6. There should be two types of material: That which encourages individual play and that which stimulates and involves group play.
7. Some material should stimulate the imagination and encourage dramatic play.
8. Most of the material should be usable in a variety of ways, not merely entertaining.
9. Some material should be within the child's field of experience, while other material is needed to broaden his experience and knowledge.

10. A few carefully selected pieces of material and equipment are worth far more to the child's development than a hit-and-miss collection no matter how expensive. There must be a variety.

Material for Outdoor Play.—A modern playground or yard should offer something from each of the following groups:

First, it should be large with both sunshine and shade.

Second, it should offer crude material that can be used in many ways, such as different-size boxes, boards, wheels, rope, barrels, small ladders, old tires and horse reins.

Third, material and apparatus that stimulate vigorous play, such as wagons, tricycles, swings, turning bars, large balls, jump rope and see-saws.

Fourth, materials for quiet play, such as sand, water, small toys, dolls and accessories and bubble pipes (very good for breath control).

Fifth, nature opportunities such as sand, water, gardening, pets. Clover and dandelion blossoms lend themselves to various activities.

The most interesting play yard to a child is not always the one equipped with commercial apparatus but may rather be one with "home-made" swings, see-saw, turning poles or rings and a great many boxes, boards, rope and what many people consider discarded material. Tin cans with rough edges hammered down are far more useful in sand to a young child than many of the commercial toys.

Material should be provided to care for the age development of the child. The child between two and four years of age is in an individualistic period. He likes to be near others but not always with them. He likes to play alone. The child of four and five years of age is more social and enters into small group play. A five-year-old child's play is more purposeful and constructive, and begins to show a sense of responsibility for the care of toys.

Material for Inside Play.—Our experience showed us the advisability of dividing this type into two groups:

1. Material for school hours.
2. Material for out-of-school hours.

There are several reasons for this division:

First, the child may thus have a larger variety of material at a low cost.

Second, young children soon tire of one thing.

Third, some material adapts itself more readily to one situation than to another.

Fourth, the space in which the material is to be used and the conditions under which it is to be used determine the material to be used.

Fifth, speech and speech-reading should be used all day. A variety of material and situations gives more opportunities.

Sixth, there are times and conditions when it is necessary and advisable to have the group under direction, yet given freedom for expression of ideas and the opportunity to move about. The floor, small rugs and a large assortment of educational material which is elastic in its possibilities meet this situation.

Some material we found best suited to our needs and conditions, but not always limited to one time or another. For instance,

A. Materials for school hours

(Some of this material was used for sense training, games and directed use as well as for free expression.)

Large colored peg boards
Large colored beads for stringing
Small colored beads for stringing
Bradley's Toy Animals
Insets, cups, wooden dolls, balls, eggs, etc.
Puzzles of various types
Playskool Hammer Nail
Tower Rods, two sizes, two forms
Playskool Tower, graduated squares, graduated rings
Hollow Square Puzzle Board
Cube Tray, graduated cubes
Playtime Villege Peg Board
Krazy Ikes Set
Tiny Tot Assortment Set
Large Peg Board, four-size pegs
Ring Toss Game
Felt-O-Grahams
Plasteline
Sticks, assorted size and length
Cardboard, assorted sizes
Picture books
Colored Parquetry Tablets, large size

Sewing spools, colored
Blocks of various types
Pull toys
Small wagons
Small wheelbarrows
Bean bags, balls
Blackboard
Crayolas
Scissors, magazines, scrapbooks, etc.

Materials in combination give elasticity of use, such as peg boards, large colored beads, parquetry blocks; sticks, parquetry tablets; small dolls, blocks, small wagons; spools, cards, dolls, sticks, blocks, etc.

B. Material for out-of-school hours.

Dolls and furnishings
Trucks, large and small
Dominoes (used as blocks)
Scissors, magazines
Paper, scissors, paste
Old clothes for dressing up
Kodak spools
Sewing spools
Soap bubbles, pipes, spools
Cardboard boxes
Large floor blocks
Large balls
Tenpins
Wooden trains
Newspaper, kraft paper
Children's personal toys from home, etc.

The Influence of Preschool Training in the Home Life of the Deaf Child

The children living close enough went home over week-ends, others once a month, still others only at Christmas and the summer vacation. Each mother was shown and told how to help her child while he or she was home. In some cases material was given the parents to help them during the summer months. To the parents who could not visit the school and see the work a letter was sent explaining the methods and how they could communicate with and help their child.

The results were most gratifying to both parents and teacher. The influence of preschool training and the development and adjustment of each child were followed into the

home life. A brief summary from the parents' reports follows.

"He seemed more like hearing children."
"His behavior and reactions to conditions were more like those of hearing children."
"They were more responsive, happier and had developed a more intelligent interest and understanding of what was going on about them."
"By means of speech-reading and speech they were able to understand a great deal of what was expected of them and of what was going on about them."
"They had developed independence, self control, initiative, and a keen observation."
"They had learned to think for themselves, to co-operate with other members of the family and to take their place in the family group where before they did not understand and were not understood."

Many parents expressed gratitude and appreciation that their little deaf child could be given an early training. The following taken from one mother's letter expresses the feeling of the others: "I am not sorry I sent ——, heartbreaking as it has been to part with her besides having her afflicted in this way. I'd gladly urge every parent to send a preschool-age child who is totally or partially deaf. It seems to bring out the best in them, besides the learning. It has seemed miraculous to us to have —— learn so much in two short years and before she is six."

The general opinion among the parents seemed to be that the child during preschool training was developing more normally than before such training. He had a livelier interest in, a readier response to and a keener appreciation of, all life situations in which he found himself. As a result he adapted himself better to his family life.

Summary and Conclusions

As stated elsewhere in this paper the purpose of this study of the preschool-age deaf child was to determine, if possible, the advisability of early training and its advantages to the deaf child at school age, the methods of teaching the young deaf child, and the age at which the Illinois School could best accept the young child. Also to determine if possible the measurable difference between a hearing preschool child and a preschool deaf child in interests, play activities, and personality development.

The number of entering pupils varied yearly, giving to each year its special problem for study. The number of cases has not been so large as a problem in research should consider, owing to the capacity of the cottage where only fourteen pupils can be accommodated. However, the findings should be of value in considering the education of preschool deaf children and may be considered in relation to other studies on the same problem when available.

The only vital difference between a hearing and a deaf preschool child seems to be in the comprehension and use of speech and language. The results of the study seem to show that if a young deaf child is given the same unhampered opportunities that a hearing child has he develops interests, play activities and a personality growth very similar to those of a normal child. His mental development seems to fall short only where language is involved and here speech, speech-reading, and later reading and writing, supply that need.

No progressive educator denies the urgent need of some kind of training for the deaf child before school age whether in the home, public school, or residential school. The ideal condition is, of course, the one where the young child may remain in the home as long as possible while receiving an early education. It is, however, unfortunate that the majority of deaf children do not live within a short distance of a school for the deaf where they may attend as day pupils. This condition necessitates attendance as boarding pupils in a residential school.

The method of teaching the young deaf child and the age of admittance depend upon the conditions in the particular school. In the Illinois School two conditions were tried. One, where the pupils of four years of age lived in the same dormitories and conformed to the same schedule as the regularly accepted primary pupils, was unsatisfactory. The other, more satisfactory, was to have the pupils live in a cottage removed from the main unit and where a satisfactory environment could be given the young child.

After four years of experience with children under four years of age and of five and a half years of age the results

indicate the inadvisability of accepting in our department, as it is now, children under four as boarding pupils, or accepting in the department under present conditions pupils over five years four months.

The method used in teaching the young deaf child grows out of his interests, activities, age and development, and is based upon modifications of play situations and play devices. The subject matter included under teaching is similar for four-, five-, or six-year-old children and covers speech, speech-reading, sense training, reading and writing.

Children as young as three years of age can be trained in residential schools under the proper housing conditions with an adequate number of house officers and special school conditions. Children over five years of age have reached a higher level of development, they are not considered of preschool age but kindergarten and require a different program altogether than for the preschool-age children.

The average deaf child six years of age with two years preschool training has many advantages over a non-preschool trained child of the same age, provided neither has had enough hearing to acquire language. These advantages may be summed up in the following conclusions:

The preschool-trained child has received his child's right of unhampered development and companionship with boys and girls of his own age. At the age of six, or thereabout, he has a well developed interest in life about him. His mind does not need to be forced into activity or his interest aroused as does that of an untrained child. His mind is awake and he is eager to follow suggestions with a better understanding in interpreting and utilizing them for his advancement.

He has been surrounded by understanding guidance and influence during two of the most impressionable years of his life. His environment has not created his intelligence but it has given scope and material to direct and call it forth.

He has received a knowledge, understanding and use of language as a means of communication through speech, speech-reading, reading and writing before the appointed school age.

He has received an early training and development of memory, attention, observation and concentration which are so essential to his education.

His mental and social development is more nearly parallel with that of a hearing child of his age. Through comparison with a study of hearing children of the same age, it has been learned that the preschool-trained deaf child responds favorably to play activities and other normal stimuli and has developed a widened sphere of interest which is similar to that of a hearing child. Sympathetic guidance has encouraged the growth of his complete personality to the point where he is able in his small way to participate actively in the hearing world about him and to begin his adjustment for a normal life among hearing people.

Pupils who received two years training were better prepared to enter the regular grade school classes than those with only one year training, and the pupils with one year of training were better prepared than those without training at the age of six.

The question still remaining to be answered is: Will the preschool-trained deaf child complete the regular school work in a shorter time than a child not so trained, or will he take the same length of time but have acquired a greater sensitivity to conditions and people and consequently enjoy a richer understanding of life?

California's Policy of Educating the Deaf—II[1]

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The School Policy as to Methods

Every deaf child who is of suitable age and of sound physical being is admitted regardless of mental ability so long as he is teachable. No child who is found mentally deficient is permitted to remain. All are given thorough physical examinations as soon as they enter the school. Likewise, any child who is suspected as being mentally deficient is given sufficient trial, and if it is definitely indicated that his mentality is below normal, he is sent to selected psychologists for testing. The recommendations of the psychologists together with the results of the school's findings are carefully studied and followed.

Fully realizing the serious retardation in educational opportunity and accomplishment of the average deaf child, the school authorities have made necessary provisions in grading to afford him three preliminary years before taking up first-grade work. The entrance age is five and one-half years. At this point it is well to state that for teaching and retention purposes, the best entrance age for the average deaf child is seven years.

Naturally all children are started in oral classes. Speech, lip-reading, and the written form are used. Signs are not used in classroom instruction. The fact that signs are not a means of instruction but are used as a means of communication cannot be emphasized too strongly. The use of finger spelling is not discouraged in any class. The difficulty in this particular respect is the lack of understanding on the part of the teacher. The main objective, however, is an educated mind. Those children who, after fair trial, fail to make satisfactory progress, are placed in manual classes where finger spelling and written form are used. The school follows the

[1] Continued from the Annals for March, pp. 166-174.

combined system, which means a school where there are orally taught classes and manually taught classes, both being separate as far as classes are concerned.

The school authorities appreciate and understand the life of the average deaf child. They know that there are varying types, mentally and physically, among all groups of young people, both hearing and deaf. Because of this there is no restriction as to means of communication used by the pupils outside the classroom. In their play, in the dining room, and in their group meetings, the pupils use signs and finger spelling without fear of punishment or restraint. The authorities and the pupils know the value and proper place of signs and do not abuse the use of them. In chapel where sermons, lectures, and stories are given, signs are used. To address a group of three hundred children, of ages from 8 to 21 and of varying mental levels, in any other manner does not seem logical or proper. Each pupil can interpret the signs in terms of his own language level. The school management does not at any time try to get behind the skirts of "signs" as an alibi for any of its weaknesses. The average superintendent and average teacher, who truly do not understand and appreciate the problem of the deaf child, have for years blamed the use of signs for the weaknesses in speech, in lip-reading, in use of English, almost for everything. This truly is a sad situation, indeed, because such a stand is false and is put up for self protection. It is far from being the truth. The common weaknesses in language expression are found everywhere regardless of the use or non-use of signs. Among deaf children who are never permitted to use or see signs one observes the self-same language weaknesses, faulty speech, and inaccurate lip-reading. Signs used in the proper places, at the proper times, and always as a *means* of *communication* and never in classrooms will never interfere with or hold back the progress of the average deaf child. On the other hand, when properly used, signs prove a great asset in mental development, in social growth, in general happiness, in better and more wholesome discipline, and finally in a more normal later adjustment as an adult.

The School Program

Inasmuch as it has become the common practice to admit children as young as five and one-half years of age, the management has arranged to allow three preliminary years before taking up first-grade work. It is far better in every way to have the entrance age held at seven years of age because of the child's maturity, stronger physical endurance, and keener understanding at that age. It has been found that the progress made is stronger and more firmly grounded.

The unpedagogical theory of holding back the child's ability to read and to write until the child is able to speak the word, expression, or statement, does not hold in this school. The child sees the written form and is taught to write along with his speech and lip-reading. The fact that the child's reading comprehension is beyond his speech ability does not worry us. In fact, it is pedagogically sound and such is encouraged. However, one must not say that the speech and lip-reading are neglected in any way. To us this is the only humane way to educate deaf children. The disappointment that the child still suffers in the lack of an early language reading sense is strong and efforts are being made to remedy this.

As soon as the child possesses a beginning comprehension, reading plays a prominent part. The teacher is expected to build her own reading material based on single statements, couplets, and so on until the child is ready to take up preprimers. Reading has been and still is a weakness in the work with the deaf throughout the country. Throughout the grades required reading is prescribed and close record is kept of all such accomplishment.

When the average child reaches the sixth grade, representing about eight or nine years in school, an additional year is allowed as it has been found that at this point the child is struggling with the use of textbooks and is handling several varied subjects, all demanding language comprehension. Therefore, it is felt that previous language principles should be thoroughly reviewed and weaknesses straightened out in order to afford the child greater opportunity for normal

progress in the use of language from this point on to graduation.

Beginning with the sixth grade and continuing throughout the school, Stanford Achievement Tests and also Metropolitan Tests are used yearly to keep a check on the status and progress of the pupils. At the present time, these are the best available means to check accomplishment. However, they are not exactly suitable to the needs. Along with these tests a requirement of a written expression is made of each pupil. One must never lose sight of the determining factor of the use and comprehension of language and that it is the key to the average deaf child's progress and accomplishment. It is well to state here that such tests are used with all deaf pupils coming from other schools so as to enable the school management to make proper grade placement.

The six highest grades of the school follow the rotating system. There are six periods of forty-five minutes each daily. The schedule is elastic and is so arranged that there are "double periods" devoted to the subject of language. Likewise, pupils are able to attend grades either higher or lower than their own home grade in any of the subjects. For example, a pupil carrying on tenth-grade work in general may, because of weakness in mathematics, take his period in arithmetic with the ninth grade. In addition to this worthwhile arrangement, there is a policy of endeavoring to build up and strengthen various weaknesses among the pupils. The ideal set-up would be to have two or three free-lance teachers as coaching teachers in the intermediate and advanced grades. However, during such pressing times as the present, it is impossible to have such arrangement. All teachers of the deaf are required to devote so many hours a year to extraneous duties. Several of the teachers are excused from all such outside assignments, and are given the responsibility of "semi-coaching" teachers. They put in so many hours a week aiding certain pupils in speech corrective work, in lip-reading, and in weak subject work.

Any school management that does not require of the entire teaching staff a daily outline, workbook, or detailed sheet of what the teacher plans to teach that day is not playing

fair with the deaf child. A teacher who enters her classroom without a definite and clear-cut detailed outline of her day's plans should not be permitted to make her bread and butter as a teacher of the deaf. The easiest field of endeavor in which one can "soldier" on the job, and yet the most disastrous because of such tactics, is that of teaching the deaf. It should not and must not be allowed. If one does not know the problem and does not know how to teach the deaf, she should be dismissed from the profession without a moment's delay.

The California School management requires a daily outline carrying a detailed account of what the teacher hopes to teach for the day. This plan is not to be ironclad but it must be used as a guide. It must be based on the grade course of study and must be governed by a definite set of objectives. There must be a dovetailing of work day by day. Also each teacher keeps her progress book or an account of the grade accomplishment. The daily outlines are carefully checked weekly by the supervising teacher and the principal, the progress books are called in from time to time by the principal and the work carefully studied. Such arrangements are of great importance and indirectly guarantee the deaf child a square deal. It is recommended to all schools, state residential, city day-schools, and private.

Things being equal, a large degree of the success and strength of a school is measured and governed by the proper placement of the teachers. It is a great waste to compel a good primary teacher to work in the advanced department. Through close study, personal consultation, regular check of results and accomplishment, and classroom observation, the management endeavors faithfully to place each teacher where she can do the most good. In all schools there are special classes of retarded children because of one reason or another. Some children are inherently sound but have suffered at the hands of inexperienced individuals. Many times several can be retrieved if cared for in time and if placed under the proper teacher and teaching. Although to teach a special class does not carry with it any glory and although one's selection is oftentimes misunderstood, the teacher who is so designated should feel privileged and proud. He or she

should meet the challenge and put forth every ounce of effort toward the teaching of a special class. The best returns, the greatest feeling of satisfaction, and the lasting degree of thanks are to be experienced with these groups. All praise is due the true and conscientious teacher of a special class in a residential school.

True education is adjustment. Life, its conditions and demands are ever changing. Adjustment to life naturally follows this same principle. To appreciate and to understand this adjustment, one who is responsible for the growth, development, and preparation of children, must from time to time prepare and grow with these changes. This is done by study and professional growth. Each teacher must carry a certain number of units of professional study. This is not required yearly but at the convenience of the teacher and at regular intervals. Without such planning the average teacher of the deaf rapidly falls into a rut, becomes stereotyped and dull, and as a result her deaf children suffer.

Distinction Between "Deaf" and "Hard of Hearing"

The authorities at the California School have for many years been deeply concerned with the differentiation between the deaf child and the hard-of-hearing child. They have initiated the vital distinction between the deaf child with sound perception and the hard-of-hearing child with actual hearing. For years they have discussed this very important matter, have taken issue with certain superintendents and members of the profession, have endeavored to correct the far-reaching and serious effects of misinformation and wrong reasoning put forth by certain otologists and hearing-aid manufacturers, and for a long time have stood alone in the matter of sound perception versus actual hearing. Much harm has been done because of the utter lack of proper understanding of the difference between sound perception and true hearing and of the definite limitations of sound perception. When this is clearly understood by all and when the objectives are properly outlined, the deaf child and the hard-of-hearing child will experience a better day. Although it may be justified under present existing conditions, it is edu-

cationally and socially wrong to teach the deaf and the hard-of-hearing child side by side in the same classroom. Naturally there will always be found certain cases of defective hearing which are so serious that for actual educational purposes the individual can rightfully be classed as deaf. However, these are far in the minority. When a hard-of-hearing child can hear and clearly interpret intelligently spoken language within eight or ten feet distance with or without a hearing aid, he should remain in the public school among the hearing children. On the other hand, a hard-of-hearing child, who remains in the public schools and has been "overlooked" educationally for a number of years although for some reason or other he has been regularly advanced from year to year, presents a most difficult problem when he finally enrolls in a school for the deaf. All schools for the deaf have such children, but the important thing is the manner in which they are cared for in the school. Among the 310 children in the California School there are about fifteen truly hard-of-hearing children.

Most cases of defective hearing are progressive. This defect cannot be so readily checked or remedied as defective vision. The use of hearing as the avenue of instruction is of the greatest importance. Here, the policy is to make use of the hearing wherever possible. Therefore, several of the hard-of-hearing children in attendance are supplied with hearing devices which are used throughout the day. For a certain period of the day, special coaching and training are given these children in the use of the device and of their hearing. A teacher is assigned the responsibility of all work with the hard of hearing, with the use of hearing aids, with all testing, and with the careful study and testing on the radioear of all children at the school, deaf or otherwise.

Every child is given a thorough test on the radioear and a complete record kept of his degree of sound perception if he is deaf, and of his actual hearing if he is hard of hearing. All such tests are made the early part of the school day and under the most favorable conditions. The very young child may not react satisfactorily the first few times. Three tests are made before any definite result is tabulated. The chil-

dren are then grouped according to the degrees of sound perception. The objective in the work on the radioear with the deaf with sound perception is better speech formation, enunciation, and better lip-reading. There is no thought of endeavoring to re-educate the hearing to the point of using hearing as a means of instruction. Such would be utterly out of the question and a waste of time. One cannot be too emphatic about this point. At present the work has not progressed sufficiently to permit of group work with the radioear but such is the plan to be followed.

Vocational Training

Because of the lack of physical accommodations, the authorities have not been able to promote its entire program of vocational training. However, building plans, selection of trades, and all that go to make up a modern vocational department have been studied, planned, and approved.

All teachers of the vocational department must hold credentials to teach. They are on the same basis in every way as those of the academic department. The vocational department receives the same recognition as does the school department. In addition to teaching the trade, the instructor is expected to teach the language common to the trade. He is responsible for this phase of the training as well as for the rudiments of the trade. The school authorities do not advocate the policy of an outsider teaching the language of the trade to the pupils while in the shops.

Before the boy enrolls permanently in any one trade, he goes through a "try out" period for two years. For a period of five months he takes up one of the trades offered. His work, attitude, ability, aptitude, and accomplishments are carefully studied, and finally when his two-year period is up, the teachers in conference, together with the boy, decide in which trade he is to be enrolled.

In all schools whose doors are open to all deaf children there are to be found several pupils who have reached their academic level long before their full number of years in school has been completed. For this particular group, the California policy is to transfer them to the vocational department as all-day shop pupils. They devote their entire

day to their respective trades. Daily they attend a special class in language instruction for a period of an hour and one-half to two hours as the case may be. Practical language instruction for the individual's needs is carried on and very satisfying results have been attained.

Nothing affords a deaf boy greater confidence in his ability than to be able to serve as an apprentice in his trade in the city. There are several other advantages in such a plan. Whenever possible, a boy is permitted to devote half his day working in a shop in the city. For the last three years several of the boys have followed this policy. They have worked in local shoe repairing establishments, in bakeries, in lens grinding shops, and have rendered services in gardening.

Although such work as janitorial, kitchen work, and waiting on tables is not part of any vocational department, the training in these phases is given so that in the end, should the proper vacancies occur in the school, the most suitable deaf graduate is offered the opportunity of filling the position. At present there are several young deaf graduates employed in these capacities.

Each year a dependable and properly recommended former deaf pupil is permitted to return to the school as a part-time worker. In return for room, board, and laundry, he does janitorial work, kitchen work, and such chores for three and one-half hours daily. The same arrangement is available to a deaf girl. As soon as he or she learns to answer the requirements and, in doing the work, indicates dependability and efficiency, he or she is placed in the first vacancy that occurs.

Continuation of School Work Outside the Classroom

No school can attain any degree of successful accomplishment without giving very close consideration to its organization and personnel in care of the children outside the classroom. The individual who is responsible for the general welfare and development of the child when he is not in the schoolhouse is as important to the general success as is the classroom teacher. Both are of equal importance in the life of the deaf child and should at all times receive the same recognition and consideration. The California policy is to

give such recognition to this indispensable and vital service to the deaf child. First, in order to surround the child with the necessary personnel, it is essential that the standards and requirements be of the highest type. At present, practically all members of the staff of housemothers and counsellors are college graduates and persons of splendid character and ideals. Character building and the instilling of high ideals are as important as is the knowledge of the three R's, if not more so.

The California School is one of the first, if not the first, to establish the positions of dean of boys and of dean of girls. These are very important positions in any school and demand the most careful selection. The deans must be intelligent, efficient, faithful, and understanding persons. They must possess a love of children and most of all must be interested and concerned about the life and fortunes of the deaf child. They must be in complete charge of all phases and activities affecting the child other than formal instruction in the schoolhouse. These responsibilities are delegated by them to their co-workers who are known as housemothers and counsellors. At present for the 310 boys and girls there are in addition to the deans ten housemothers and counsellors. From this one can readily see that the ratio stands one officer to every 25 children.

Realizing that the deaf child spends a large part of his day outside the classroom and also appreciating the limited opportunities of the deaf child to continue his learning outside the classroom, the school management has established the policy of continuing the educational processes, informally, under the direction of the deans, housemothers, and counsellors. Language common to the outside life of the child is taught through games, stories, and similar exercises. Weekly bedtime stories, pantomime, and reading are carried on under the direction of the deans. Matters of personal hygiene, dining room etiquette, procedure at socials, bridge, and parties are taken care of in a very commendable manner. Typing, primary sewing, novelty work, and practical lipreading are also part of the outside activities. In other words, the housemothers and counsellors teach as well as care for the children. Such arrangements mean much in the full develop-

ment of the average deaf child and are strongly recommended to every school for the deaf.

One of the counsellors is designated as teacher-counsellor. One half his time is devoted to teaching and developing the language of the all-day shop students. This plan has proved invaluable and great satisfaction has resulted from the arrangement. Whenever necessary and time permitting, this teacher-counsellor also acts in the capacity of coaching teacher for a few of the high class students who are preparing to enter Gallaudet College. This policy makes it possible for the high class student to receive his full time in the classroom as well as the extra time given by the teacher-counsellor on the outside.

This in general is a fair cross-section of the manner in which the California State School for the Deaf and also the state are endeavoring to render true educational service to the average deaf child. It has been necessary to be brief and concise in developing the various phases and points of the policy. In fact, the different points have been merely mentioned. Each one of the phases could readily be developed into an article of interest in itself. California during the last six years has initiated certain progressive and constructive steps in the interest and welfare of the deaf child. It has done this not only in the hope of bettering the status of the children in its own state but also with the strong desire of leading the way for other states to follow so as to insure the betterment of all deaf children throughout the country. The policy has been in progress for six years and is still in the process of full development. It is logical and indicates in every way a stronger and better future for the average deaf child in his very difficult and uphill struggle to attain a satisfactory and worth-while level in the life of the community. The management feels that this is the only practical way to attack and solve the problem. There is no doubt that this policy will reach and touch more deaf children and afford them a greater opportunity than they have experienced in the past. The hope is that others will investigate the plans and in so doing visualize the value of such arrangements, and as a result establish the procedure for the deaf children under their supervision.

Testing Deaf Children with Kohs Block Designs

By EDWIN G. PETERSON, M.A.
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TEACHERS of the deaf have long desired suitable tests for measuring the intelligence of deaf children. The standardized tests which have been developed and which are in use have been criticized because of costly materials required, difficulty of testing pupils and length of time required to administer and score tests.

Intelligence testing among the deaf has been limited by the lack of adequate testing devices. It is generally accepted that language tests are not suitable for the deaf.[1] Therefore, the trend has been rather toward performance tests as more reliable measures of intelligence.

Performance tests are not entirely adequate for measuring general intelligence, partly because of the various types of intelligence and partly because such performance tests do not seem to measure all aspects of intelligence. The writer in collaboration with Mr. James M. Williams standardized the Goodenough Intelligence Test for the deaf by utilizing drawings.[2] It was found that this test was in many ways quite satisfactory for the deaf. Its correlation with other standard types was rather high. However, it was not suitable for any age group above thirteen; therefore, its value as a medium was limited.

Since the original standardization of the Goodenough Test for the deaf, tests have been made in the Michigan School for the Deaf, Minnesota School for the Deaf and the Saskatchewan School for the Deaf and the results are somewhat similar to those found by Peterson and Williams. Because of its limitations in being suitable for only low-age groups the writer has been seeking other tests which would be satis-

[1] Day, H. E., Fusfeld, I. S., and Pintner, R., "A Survey of American Schools for the Deaf," National Research Council, Washington, D.C., 1928, p. 252.
[2] ANNALS, September 1930 (vol. lxxv, no. 4), pp. 273-290.

factory for the deaf and which would conform to the desired requirements of ease of administration, scoring and low cost of equipment. The most satisfactory test found in this search is the Kohs Block Design Test which was developed by Dr. S. C. Kohs, psychologist, Court of Domestic Relations, Portland, Ore., assistant professor of psychology, Reed College, and professor of psychology, Portland Center, University of Oregon. Because his work placed him in contact with many foreign-born and illiterate subjects, his test was made non-verbal with a view to having a medium which would be satisfactory for testing subjects who are handicapped in self-expression by means of the English language. Terman makes the following comment on the test in question: "Other things being equal, any psychologist prefers to rate the intelligence of his subjects by what they can do rather than by what they say. The carefully worked out performance test has a wide field of usefulness, as all who have engaged in clinical work will readily admit. The need for such tests has never been adequately met, largely because really valid ones are much more difficult to devise than is the case with tests which utilize language. In the upper ranges of intelligence, especially, most performance tests have but little differentiating value, simply because they do not draw heavily enough upon the higher mental processes."[3]

Terman further states, "To be widely serviceable a test should demand only the simplest material or apparatus, should require at most but a few minutes of time, and should lend itself well to uniformity of procedure in application and scoring."[4] In defending his premise regarding the suitability of his test, Kohs states, "The special value of the block-design test lies in the fact that valid results may be obtained independently of the 'language factor.' Neither deafness nor lack of language-understanding should be disqualifications in the proper performance of the test. The

[3] Kohs, S. C., "Intelligence Measurement," Macmillan Co., 1927, p. vii, preface.

[4] Terman, L. M., "The Stanford Revision of the Binet-Simon Scale for Measuring Intelligence," Warwick and York, 1917, p. 150.

block designs may therefore be utilized in the study of racial differences, in determining the mental capacities of the deaf and of those suffering from various other language handicaps."[5]

There is no evidence indicated that Kohs has used his test with deaf children but it is interesting to note that Drever and Collins[6] used it as part of a battery of performance tests of intelligence given to deaf children and hearing children. The tentative norms obtained by Drever and Collins indicate that the deaf are not retarded in comparison with hearing children. However, it is impossible to comment further on these tests for two reasons; first, because the method of presentation of the tests does not conform to that suggested by Kohs in his standardization, and secondly, because the complete study made by Drever and Collins is not available. Kohs readily admits that "although this test may be utilized as a measure of intelligence by itself, its greatest value, however, may be realized in combination with other performance tests which are capable of incorporation in such a scale."[7]

Much has been written regarding aspects of intelligence. Kohs states, "A cursory examination of the demands made upon the mental operations of the person tested with the block-designs will clearly reveal that attention, adaptation, and auto-criticism are all involved in the successful accomplishment of each task."[8] In this connection the results of Day, Fusfeld and Pintner's investigations seem to indicate that auto-criticism is lacking in the deaf.[9] The extent to which auto-criticism enters into the test is problematical although one can conclude that it plays a rather important part. Whether further tests with this device will indicate the necessity of correcting this opinion, or whether further re-

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[5] Kohs, *op. cit.*, p. 235.
[6] Drever and Collins, "Performance Tests of Intelligence," Oliver and Boyd, London, 1928 (since revised, 1936), p. 19.
[7] Kohs, *op. cit.*, p. 271.
[8] *Ibid.*, p. 174.
[9] Day, Fusfeld and Pintner, "A Survey of American Schools for the Deaf," p. 286.

sults will indicate that the original opinion is correct remains to be revealed by more complete studies.

The advantage of the Kohs Block Design Test as a device lies largely in the fact that there can be but little variation in the findings of two examiners and that the only chance for difference is in the record of number of moves made.[10] This makes it possible for the lay-teacher to become quite expert in testing by means of this device in contrast to the Goodenough test which requires elaborate study and careful examination of each drawing to secure accurate scores. The Kohs test seems simpler to score and is less likely to be subject to error. In making further comparison, however, it is to be recognized that the Goodenough test is a group test and a group of twenty or 30 deaf children may be tested at one time, whereas with the Block Design Test from 30 to 45 minutes are required for each subject and in some cases a longer period.

Since 1931 the writer has made a study of the Kohs Block-Design Test and its value for the deaf. While no definite effort has been made to standardize it for the deaf due to the lack of a sufficient number of subjects available, this report represents results from 100 deaf children, ranging in age from six years six months to eighteen years inclusive. It should be kept in mind that the results obtained are not conclusive or definite. The purpose of this report is mainly to indicate some comparison between the Kohs Block-Design Test and the Goodenough Intelligence Test and to commend further study of this test to those interested in obtaining additional data on the intelligence of the deaf. Over 200 pupils were tested in 1931 and 1932. After the writer had practised administering and scoring the test, the original score sheets were destroyed and in 1933 and 1934 one hundred and thirty pupils were tested, some of whom had been previously tested. Of this number some 100 cases were selected. Those eliminated were pupils who made no score whatever, indicating that their mental age was five years and seven months or below. Those pupils tested whose ages

[10] Kohs, *op. cit.*, p. 235.

were above seventeen years were also eliminated, leaving 102 cases. In order to simplify scoring, two of these cases were eliminated by chance, leaving 100 cases on which this study is based.

The pupils are representative of both rural and urban areas, and compose a cross section of the school population in the Saskatchewan School for the Deaf. All grades are represented.

The test material consists of sixteen cubes of one-inch dimension, All cubes are painted as follows: One side red, one side blue, one side white, one side yellow, one side blue and yellow divided on the diagonal and one side red and white divided diagonally.

The original number of designs was 35, but 15 were eliminated after early preliminary tests. The designs are graded in difficulty which increases by modifying the designs at various stages in the following manner:

1. By the use of the full colors
2. By the use of few diagonaled sides
3. By the use of all diagonaled sides
4. By turning the design on one of its corners
5. By eliminating the outside boundary line
6. By increasing the number of blocks to be used
7. By increasing dissymmetry in design
8. By decreasing the number of different colors used in each design.

The final revision eliminated three more designs, leaving seventeen, and decreased the time necessary to apply the tests.

The designs appropriately colored are printed on medium-thick, white, semi-gloss cardboard. The printed designs placed in the center of the card are one fourth the size of the actual designs when the cubes are used.

On each design there is a time limit range from one and one half minutes to four minutes, depending on the difficulty. If the full limit is allowed on each test, working time totals 45 minutes for all the seventeen designs. In some cases it takes a shorter period and others longer.

Each design has a score value. Provision is made for de-

ducting certain points if the design is completed in excess time or with excess moves. Successful performance, speed and accuracy are combined in the final score, successful performance receiving the greatest weight, speed next and accuracy next.

A scoring table accompanies each set of material which gives the mental age equivalent of scoring values. No mental age below five years and seven months is included. The lowest scoring point shows a mental age of five years seven months and the highest number of points (131 points) indicates the mental age of nineteen years and eleven months. In order to compute the total score the points earned on each design are added together and as each score has a comparative mental age it is a simple matter to determine the Intelligence Quotient in each case.

The directions for administering the test are divided into three parts: The first part for subjects who can understand spoken language; the second part for subjects who do not know the names of colors; and the third part for subjects who cannot understand spoken language. In dealing with deaf pupils it was necessary to use a combination of part two and part three to insure proper understanding of the test.

The procedure used was as follows: All the blocks were taken out of the box and placed on the table so that the single-colored faces were on the top sides of the cubes, having equal number of reds, yellows, blues and whites showing. The examiner pointed to a red-topped block and the child was asked to indicate all the blocks that had the same color on top. This was done for all colors. If the child distinguished the colors properly, we proceeded with the rest of the test as outlined below.

By means of signs and gestures we instructed the subject to make the designs illustrated, keeping careful check of the time and number of moves made. In cases where doubt existed regarding the ability of the subject to grasp the idea, provision for illustrating by means of a sample design was made as outlined by Kohs.

It is not indicated definitely by Kohs whether any tests

used in the standardization were obtained by using directions in parts two or three. However, it would seem that since other mental tests requiring language are used in the standardization that all subjects must have been able to use language and the standardization, therefore, would obtain for hearing children only. The only other reference the writer has found to use of this design test with deaf children is a comparison made by Drever and Collins who include this block design test in a scale of tests. However, it is important to note that Drever and Collins have not followed the same scoring plan. The method of administration and the method of scoring both are new. The primary object of these modifications was simply to give and score the test and at the same time shorten the time required for the whole series. It is well to keep in mind that since the Kohs test was used as only one of a battery of tests in the Drever and Collins scale little attention can be given to the norms obtained. These norms are merely stated and although they indicate that the deaf are not retarded, without more complete data it is impossible to comment further on this test as used by Drever and Collins.[11]

The Block Design Test as it now stands is comparatively free from the disturbing factor of sex for the first ten designs and for ages below thirteen or fourteen. For the last seven designs and for ages above thirteen, boys seem slightly superior to girls. The reason for this difference at the upper ages and more difficult designs is not immediately apparent.[12]

In this test the males showed a slight superiority over females except at I.Q.'s of 100 and 110. The number of pupils tested does not permit special treatment by ages, and the difference noted is not significant.

Kohs believes that his results indicate that the block designs are as good as any single test in the Binet scale (though better perhaps in the sense of diagnostic value), as good as the Trabue Language Completion Tests, or any other similar single type test whether involving the use of language or mere performance.[13] As previously stated in this paper, this com-

[11] Drever and Collins, *op. cit.*, p. 19.
[12] Kohs, *op. cit.*, p. 116. [13] *Ibid.*, p. 68.

parison would not obtain for the deaf since the language factor must be eliminated in dealing with this type of handicapped person.

The positive correlation between the Block Design Test and the Binet test is .84.[14] The Goodenough test yields an average positive correlation of .76 with the Stanford Revision of the Binet Scale for separate age groups in the same range.[15] The similarities in correlation would indicate a greater similarity between the block designs and drawing test than this study shows; further investigations may tend to alter this resemblance.

In analyzing results it is important to note Pintner's statement, "This scale ..... depends upon one type of reaction for the determination of mental age. They are rarely used as the sole instrument for the determination of mental level."[16] Even though this be accepted, each single test in any battery must be standardized and proved a reliable measure if it is to be included in the battery. Hence the importance of this test as a possible part of any battery may not be overlooked, even though later findings prove it unsuitable as a sole measure.

Goldstein believes that "if effective measurements and accurate tests were devised to record the intelligence quotient of the deaf child, his I.Q. registration would not differ from that of the normal child."[17] Theoretically, we are inclined to agree with Dr. Goldstein, yet no tests have been devised which indicate a parity of intelligence between the deaf and hearing. The results of Day, Fusfeld and Pintner's survey of 4,432 deaf children seem to indicate conclusively that the hearing child is superior to the deaf child.[18] Until further comprehensive tests are made, the writer is inclined to believe that the deaf are retarded. Whether this discrepancy will be found in later studies remains for future consideration.

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[14] *Ibid.*, p. 157.

[15] Goodenough, F. L., "Measurement of Intelligence by Drawings," World Book Co., N.Y., 1926, p. x Editor's Introduction.

[16] Pintner, R., "Intelligence Testing," Henry Holt and Co., 1931, p. 170.

[17] Goldstein, M. A., "Problems of the Deaf," The Laryngoscope Press, St. Louis, 1933, p. 251.

[18] Day, Fusfeld and Pintner, *op. cit.*, p. 275.

At the International Congress on the Education of the Deaf held in West Trenton, New Jersey, in June 1933, Dr. Pintner presented a review of performance tests given to deaf pupils. His conclusions were that the probable average I.Q. of the deaf child lies between 80 and 90.[19]

The accompanying tables and graphs are largely self-explanatory. In Table I the distribution of I.Q.'s by sexes

TABLE I

DISTRIBUTION OF I.Q.'S BY SEXES IN PER CENT

I.Q.	*Male*	*Female*	*Total*
160	—	2	1
150	2	—	1
140	2	—	1
130	8	6	7
120	6	4	5
110	12	18	15
100	16	18	17
90	18	10	14
80	18	16	17
70	12	12	12
60	6	12	9
50	—	2	1
	100	100	100

is shown in per cent. It will be seen from this table that there is a definite clustering in the range of I.Q.'s below 100, indicating some retardation from the normal.

Figure 1 shows a comparison with the curve obtained by Kohs in his study of 292 public school hearing children. The retardation of the deaf is less than would be expected judging from the results obtained from other studies.[20]

A comparison between the Goodenough test and Kohs test in Figure 2 illustrates a remarkable similarity. Except for an irregularity at I.Q. 130, a uniform divergence of five points is readily observed, indicating that the degree of re-

[19] Proceedings of the International Congress on the Education of the Deaf, New Jersey School for the Deaf, West Trenton, 1933, p. 213.
[20] ANNALS, September, 1930 (vol. lxxv, no. 4), p. 289.

tardation of the deaf is less than that found in studying the Goodenough test.[20] A possible explanation of the disparity

FIGURE 1

CURVE OF DEAF GROUP SUPERIMPOSED UPON THAT OF HEARING PUPILS

(In per cent)

———— Hearing pupils, 292 cases (Kohs, p. 52)

- - - - - - - - - - Deaf pupils, 100 cases

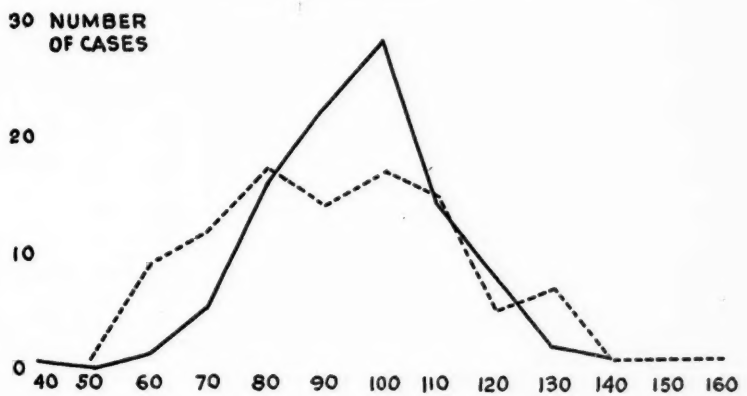


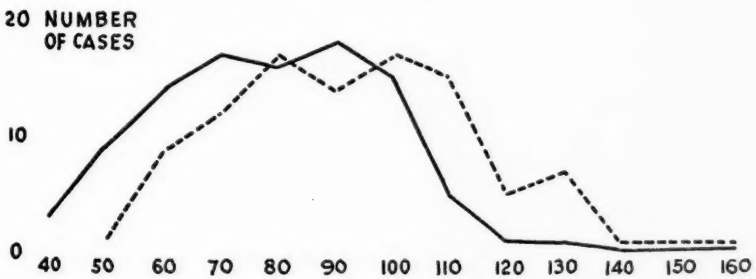
FIGURE 2

COMPARISON OF RESULTS OF GOODENOUGH AND KOHS TESTS GIVEN TO DEAF CHILDREN

(In per cent)

———— Goodenough Test (330 cases)

- - - - - - - - - - Kohs Test (100 cases)



between the results of the Goodenough study and this one may be found in the realization of the fact that no ages

above fourteen were included in the former study, while ages to seventeen were studied in the latter.

TABLE II

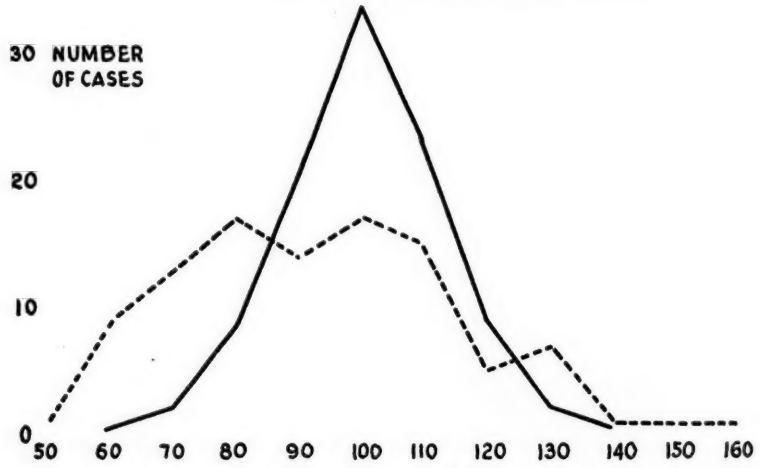
COMPARISON OF TEACHERS' ESTIMATES OF INTELLIGENCE AND I.Q.'S OBTAINED BY MEANS OF THE KOHS BLOCK DESIGN TEST, IN PER CENT

Classification	*Teachers' Estimates*	*Kohs' Test*
Very Superior (above 130)	10	5
Superior (110-130)	21	16
Average (90-109)	47	29
Inferior (70-89)	17	35
Very Inferior (below 70)	5	15
	100	100

Table II describes the relationship between the results of teachers' estimates of intelligence and the results of the Kohs test. The low correlation is to be expected in view of

FIGURE 3

CURVE SHOWING RESULTS OF KOHS TEST GIVEN TO DEAF PUPILS SUPERIMPOSED UPON TERMAN'S NORMAL DISTRIBUTION CURVE



a positive correlation of .23 between teachers' estimates and Kohs' study of 291 cases of public school pupils.[21]

The graph (Figure 3) showing the results of our findings in this study superimposed on Terman's normal probability curve bears out previous studies regarding the retardation of the deaf.[22]

It is hoped that further studies of the Kohs Block Design Test will reveal more adequate information regarding its reliability for the deaf. The results of this study indicate that it is worthy of further investigation. The test itself requires but inexpensive and simple apparatus; it is not difficult to administer or score. The chief disadvantage lies in the time required to test subjects. In dealing with the deaf, the writer believes that individual tests are more reliable measures than group tests since the examiner can be certain that the directions are entirely understood by the subject.

The writer acknowledges assistance rendered by Miss Edith Franks, R.N., and Mr. Ross Hamilton in testing pupils and analyzing results.

Summary

1. This study represents an investigation of the intelligence quotients of 100 deaf pupils in the Saskatchewan School for the Deaf as measured by the Kohs Block Design Test.

2. The children tested represent all age groups from five years seven months to seventeen years, inclusive.

3. Tables and graphs showing results were prepared.

4. Retardation of the deaf as compared with hearing public school children is indicated.

5. The range of I.Q.'s was found to be from 54 to 156.

6. The mean I.Q. was 92.5 and the median 95.

7. The greatest number of scores clustered at I.Q.'s 80 and 100; seventeen per cent at each.

8. Sex differences could not be determined because of lim-

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[21] Kohs, *op. cit.*, p. 188.

[22] Terman, L. M., "The Measurement of Intelligence," Houghton Mifflin Co., 1916, p. 66.

ited number of cases. A slight superiority of males was indicated.

9. Teachers' estimates showed an expected low correlation with intelligence quotients of pupils.

10. Definite retardation of the deaf as compared with hearing pupils was shown; the degree of retardation was less than found in a study of the Goodenough test.

11. The results of this study indicate that the Kohs Block Design Test is worthy of further study by investigators studying intelligence of deaf children.

A Study in the Analysis and Correction of the Speech of the Hard of Hearing[1]

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The purpose of this study was (1) to analyze rather carefully the speech of a small number of hard-of-hearing individuals and (2) to see what could be accomplished in the correction of that speech by using a high fidelity amplifier that would make it possible for the subjects to hear all the speech sounds. It should be noted, however, that while auditory stimulation was the predominant part of the correction technique employed, visual, tactile, kinaesthetic stimulation, in fact every technique known to the clinician, was used to supplement it.

The study was conducted in the Iowa School for the Deaf at Council Bluffs, Iowa, a state institution which has an enrollment of three hundred and seventy four. This school is classified in the American Annals of the Deaf, the official organ of the executives of schools and instructors of the deaf, as a school that employs the "combined" system of instruction. And for those who may not be familiar with that term, may I quote from the Annals January, 1934, the explanation of the combined system of instruction. "Speech and speech-reading are regarded as very important, but mental development and the acquisition of language are still more important . . . and these may, in some cases, be best promoted by the Manual or The Manual Alphabet method. Speech and speech-reading are taught only where the measure of success seems likely to justify the labor expended." In other words, both oral and manual methods are used.

Speech is taught only in the primary department in the Iowa School now. A course in lip-reading is given for intermediate and high school pupils who elect it. Speech as a part of language and composition receives some attention,

[1] A paper read at the annual convention of the American Society for the Study of Disorders of Speech, Chicago, Ill., December 29, 1934.

but it is not taught as a separate subject in the intermediate and high school grades. The emphasis is on "content" courses, rather than on speech either as a means of communication or for mental development. However, this does not mean that the school is not interested in speech, and in finding out the best methods of teaching it. The writer has found the Iowa School an institution in which the administrators and teachers are very alert to the many psychological and pedagogical problems involved in the instruction of the deaf and very co-operative in any research which might happily aid a little in the solution of some of these problems.

Nine high school pupils and one post graduate, seven girls and three boys, were selected for the study. They ranged from fifteen to twenty-one years in age. According to the subjective estimates of their teachers, each member of the group was average or above in intelligence. (There are no adequate objective intelligence tests for the deaf available and the judgments of teachers long associated with the pupils seemed more adequate than the objective performance tests sometimes used.) The per cent hearing loss, as obtained by the 2A audiometric tests, ranged from twenty-one per cent to fifty-four per cent. The loss is given for the better ear, of course. Deafness was either congenital or acquired at the age of a few months in every case but one, in which it was acquired at the age of six years.

I should like first to summarize some of the speech characteristics that were common to all or to the larger number of the group, and secondly to give a brief description of the speech of each individual.

The first and most striking common characteristic of the speech of these ten subjects was the lack of it. Nine out of the ten subjects had very little spontaneous speech and vocabularies appallingly small. Their vocabularies were about what one usually finds in a child nine or ten years of age. Perhaps this fact should not surprise us, but the fact that their reading vocabularies were almost as limited is surprising.

Quite a good deal of time and effort were spent in inves-

tigating the reading ability of this group. In oral reading there was almost complete lack of phrasing, or grouping into thought units. Material was read word by word, and eight of the ten subjects pointed to each word as they read aloud. It was observed that six of the subjects pointed to the words as they read silently, and occasionally they signed or spelled out the words on their fingers in difficult sections of the material when they were reading silently. The teachers in charge of study hall reported that it was a frequent occurrence to see pupils spelling on their fingers as they studied. This was true of the pupils used in this study. (In fact, the writer has observed hearing teachers in the school in conversation with each other making abridged movements of the fingers as in signing or spelling. Whether this "busy work" for the fingers assists the thought process or is simply a kind of emotional outlet is an interesting psychological problem.)

Coincident with the lack of ability to group words in the sentence or phrase in oral reading was the same lack of accent in the single word. There was a great tendency to stress each syllable equally. There was a very small percentage of "weak" forms—unstressed syllables. They were either "strong" or omitted entirely. And this leads me to another characteristic common to most of the group. That is the omission of words and syllables in oral reading, and a great many more omissions in spontaneous speech. Articles, adjectives, and all relationship words occurred infrequently in spontaneous speech.

Perhaps the most universal characteristic, common to every one of the ten subjects, and one which interested the writer very much, was the very frequent reversal of sounds in oral reading. The word "best" was pronounced "bets"; "basket," "bakset" or "batsik"; "monkey," "mukney"; "take," "kate"; "took," "koots"; "snug," "sung"; "saw," "was"; "dust," "duts"; "sank," "snak"; "breeze," "berz"; "poverty," "provety"; "task," "taks"; "chemist," "kemits." (These pronunciations were all taken directly from the oral reading of the subjects.) The writer conferred with reading teachers and their observations were that this was an al-

most universal characteristic in the oral reading of all the pupils in the school. These reversals occur also in their writing.

Eight of the ten subjects had extremely bad sentence structure. Word order was reversed and the sentences were rarely ever complete. This is doubtless the result of using the sign language, which nine of the ten subjects used much of the time.

Five of the ten subjects had voices with marked nasality. Seven of the ten subjects had noticeably a-rhythmic breathing.

Not one single subject presented a perfect *s* or *z* sound in all three positions, initial, medial and final. There was a nearer approximation to the *s* than to the *z* sound, which as will be pointed out later, was far more difficult to obtain through training than the *s* sound. Seven of the ten cases could not make correctly the voiced velar nasal consonant *ŋ* as in "king." Five of the cases presented imperfect *th* sounds; four could not make a consonantal *r;* four made imperfect *g* sounds and four, imperfect *k* sounds.

In six of the ten cases the unstressed, indefinite vowel *ə* was inserted in most consonantal glide combinations such as *gəlʌv* for "glove," *dəraiv* for "drive," etc.

Another characteristic, which all cases presented in varying degrees, was unfinished consonantal sounds, perhaps what we usually refer to as "slovenly" speech in the hearing person, as well as its opposite, "labored" speech. The two qualities existed in different sounds in the same individual. There was no glibness or facility in sound formation such as we find in the person who is receiving constant auditory stimulation and exercising the speech function. Neither was there any adequate blending of sounds; every word was composed of a number of individual sounds added together, but almost totally uninfluenced by each other. The word, the phrase, the sentence, were all summations, not configurations. This characteristic was found in every one of the ten cases.

Now may I give you a brief description of each case, since there were, of course, decidedly individual characteristics

that can not be summarized. I have with me the enlarged audiograms of each case which I shall put before you.[2] I have also a copy of the chart given in Fletcher's "Speech and Hearing" which shows the characteristic frequency regions, and also the characterisitc intensity regions for the various speech sounds. Of course as Fletcher says, this chart gives only a very crude picture of true facts, but it may serve to give a general picture of the intensities and frequencies involved in the transmission of speech. The ordinates give the sensation level of the principal components, the abscissas, the characteristic frequency regions. As you will observe, there are two characteristic frequency regions given for all the vowel sounds, and three for *r*, *l*, *ng*, *m*, and *n* (the third being probably due to intense vibration of the nasal cavities) according to Fletcher. (He made this chart of frequency regions after a study of Crandall, Miller and Paget.)

As you will observe from the audiograms, the greatest hearing loss in every case is in the high frequency regions, which would affect the consonants, particularly the sibilants, first. The curves begin to drop, however, as you will see in the middle frequencies, but they go down consistently to the right of the audiogram.

For convenience I have arranged the cases in order of the per cent hearing loss, beginning with the smallest hearing deficiency and continuing to the greatest. However, this does not mean that there is a simultaneous proportionate increase of speech difficulties.

Case No. 1, a girl eighteen years old, as you see, has a hearing loss of only twenty-one per cent without any very decided drop in the curve. The other ear, is of course, much worse.

The hearing loss was acquired at the age of six years from scarlet fever. Obviously she had acquired speech before the hearing loss. She has been in the school for the deaf eight years. Her voice was slightly nasal, infantile, and rather

[2] As the writer furnishes an adequate description of each individual, with information as to the degree of loss of hearing and the particular defects in speech in each case, the audiograms here referred to are omitted.—Editor ANNALS.

weak. The last two characteristics were probably a result of a timid and retiring personality. Although she had some pitch change, her range was narrow. She presented a decided lisp, the substitution of the voiceless *th* sound for the *s* and the voiced *th* for *z*. She did not and could not make either an *s* or *z* sound in any position in the word. She omitted final *t* sounds consistently, and final *d* and *k* sounds occasionally, although she could produce these sounds under stimulation.

Case No. 2, a girl nineteen years of age, has a hearing loss of twenty-nine per cent, in the good ear, with a considerably greater loss from 2,048 cycles on. Her hearing loss was acquired at one year of age. She presented imperfect *th* sounds for the *s* and *z* sounds, with air escaping on both sides of the tongue, a lateral lisp. There was a whistling sound as of unvoiced air escaping with many of her consonants. The best general description of her speech was given by one of her teachers. She said, "Eliza's speech sounds as if she has false teeth that do not fit." As a matter of fact her teeth were normal. The quality of her voice was surprisingly good.

These two cases presented difficulties which yielded to the therapy employed and, except for the nasality in case No. 1, were completely corrected.

Case No. 3, a girl of eighteen years with a hearing loss of 37 per cent in the better ear, acquired at one year, presented many more difficulties. It must be explained here that she has some other marked organic difficulties in addition to the hearing loss, a third-degree malocclusion, very irregular teeth, and a high palatal arch. The septum of the nose is irregular with a marked horizontal spur, and the turbinates are very large. These conditions would probably complicate the speech and voice difficulties.

Her voice, which was almost a mono-pitch, was very nasal. She had no clean cut, clearly enunciated, consonants. The worst ones were *s*, for which she substituted *tʃ; z*, for which she substituted *dʒ; k* for which she used *t;* and *ng* for which she used simply *n; g* for which she substituted *dʒ;* the *th* sounds for which she used *d;* and an imperfect *l* sound, which gave the effect of the sound being produced by raising the

back part of the tongue and putting the blade against the hard palate farther back than one makes the sound normally. All of her *l* sounds were very dark, which gave a throaty sound to the syllables in which they occurred. The sound of *w* was sometimse used for the consonantal *r*.

Vowel sounds were fairly good with the exception of the ʌ sound as in "up." For this vowel she used the *aː* (the sound in "father") so that she read the sentence, "Bell's rabbit fell in the tub," something like this: *beɫdʒ wæbit feɫ in də daːb*.

This is one of the worst speech cases and one which has been affected least by the training.

Case No. 4, a girl sixteen years old, with a hearing loss of 37 per cent had much more pleasing speech than the former, because the voice quality was much better and she had some range in pitch, although she had as many defective consonantal sounds. She had no *z* sound, although she could approximate an *s* sound, a rather strange coincidence. The jet of air emitted for the *s* sound was not quite fine enough; it was almost a *ʃ* sound, but she could not add voice to this sound. She had no *dʒ* sound, but substituted *ʒ* as in "pleasure." She had no *tʃ* sound combination, but used only *ʃ*. She used the voiceless *t* for *d*, *k* for *g* and *p* for *b*.

She also had a very dark, throaty sounding *l* and used the *w* sound for the consonant *r*. *y* was simply *n*. She would read the sentence, "My sister ran and jumped when she was playing basketball," something like this: *mai ʃiʃə wæn ænt ʒʌmptit hwen ʃiː wə pəleiən pæʃit pəɫ*.

This speech, poor as it was, seemed to need only constant auditory stimulation. The effect of the training given in this case was one of the most gratifying.

Case No. 5, a boy of seventeen, with a hearing loss of 41% in the better ear, had difficulties in practically the same consonants that have been listed in previous cases, so that I shall add only that although congenitally deaf he had a fairly normal voice with some pitch variety, but a rather rapid, jerky rhythm. And as in most cases he used very little voice. (The hard-of-hearing seem to be afraid to use any intensity; they impress one as being vocally lax.) His

vowels needed resonance, rounding. He seemed to squeeze the life out of them. Although his progress has been very slow, his speech is sufficiently intelligible that he was selected to be used in a demonstration of good speech in the hard of hearing, in a district teachers' meeting recently.

Case No. 6, a girl fifteen years old, with a hearing loss of 45% in the better ear, had a fairly normal voice with some pitch changes, and more intensity than most of the cases in this group. Her defective sounds are very similar to those of previous cases, *s*, for which she used the voiceless *th; z* for which she used an approximation to *z; y* for which she used *n; k* for *t;* and imperfect *ʃ* and *tʃ* sounds.

Case No. 7 a boy twenty-one years old, with a hearing loss of 47%, presented the most unintelligible speech in the whole group. His voice, extremely nasal, had some pitch changes. His rhythm was very broken. His speech was cluttered. He spoke, or attempted to speak, frequently on the inspiration, after which there was a tonic bloc, as in a stutterer. He seemed to try to take in too much air on each inspiration.

In addition to very imperfect *s* and *z* sounds he substituted an imperfect *ʃ* for *ʒ*, an imperfect *tʃ* for *dʒ*, *p* for *b*, *t* for *d*, (*nt* for final *d*), *k* for *g*, *f* for *v* and an approximation of a *d* sound for the *th* sounds. For *y* he used either *n* or *nə*. Many vowels were nasalized. The front vowels, particularly *iɪ*, were most nasal.

The reversal of sounds in the word, common to all the cases, was more prevalent in this speech than in any of the others. This boy has a large basal spur on the right side of the nose, which of course causes obstruction, but one of the cases presenting the best voice quality had these same spurs on both sides of the nose, in addition to a very irregular septum. So one can not be sure that the bad voice quality is due to this abnormality. This case has also a high palatal arch. The larynx is normal. He complains of "scratchiness" in his throat and "confusion" in his ears, (I use his terminology.) very soon in the training periods. Although some of the sound formations have been corrected, his speech in general seems to have improved only slightly, if at all.

Case No. 8 is a most interesting one, a boy eighteen years old, with a hearing loss of 52% in each ear. Deafness is congenital. His rhythm was slightly jerky and there was some tightness and harshness in his voice. It sounded somewhat labored, but more like the voice of a hearing person than most voices of deafened individuals.

His imperfect sounds were *s*, for which he substituted a voiceless *th* sound in initial and medial positions, and which he omitted in the final position, the *z* sound for which he used *ʒ* or *lz*, the voiceless *f* for *v*, *t* for *k*, *d* for *g*, (the word "girl" was "dirl") and the voiceless *th* for the voiced *th*, and *n* for *ŋ*.

The results of training in this case have been rather unusual. When this boy is hearing himself speak, which is possible only when he is using the amplifier, he rarely makes a mistake in his sound formations, and if he does he corrects himself. His rhythm is smooth and his voice quality improved.

Case No. 9, a girl sixteen years old, with a hearing loss of 53% in the good ear, is unique in the group that is being studied. She had a very weak voice, extremely muffled. Although she presented practically the same deficiencies in the production of consonants as the previous cases, she also made imperfect vowels. The front vowel (as in "met") was a close approximation of the diphthong *ei*, so that *met* became *mate*, the *æ* sound was also nearer the *ei* than any other sound, so that *mat* was also *mate*. The mixed vowel *ɔ:* as in "*earth*" was the diphthong *ɔi*, so that *earth* became *ɔiθ*, the back vowel *ʌ* sound was somewhat like an *ɔ* so that the word *luck* became *lock*.

Case No. 10, a girl eighteen years old, with a hearing loss of 54% in the better ear was born without any external auditory canal, and therefore with no hearing, but after operations on each ear, canals were made and she gained some hearing, which she seems now to be losing.

Her speech was perhaps the most nasal in quality of any in the group, yet the most intelligible of those with the more severe hearing losses. In addition to the usual incorrect *s*, *z*, *th*, *k*, *t* and *l* sounds, her vowel *æ*, for which she used a

sound close to *a*ɪ and the vowel ʌ for which she used a sound close to ɔ, were also defective.

Her articulation of consonants improved but her vowels and her voice quality have remained perfectly static.

Now may I summarize just as briefly as I can the kind of training given to these hard-of-hearing speech cases. The first and by no means easy task was that of making them sound conscious, or at least speech conscious, and secondly to get these individuals to use their vocal apparatus. Of course it is impossible for a large per cent of the pupils of this school to communicate in any other way than by the manual method. And it is only natural that they should use the form of communication universally understood. In classes in which the teachers speak, the pupils who have any speech seem loath to talk, and they use oral speech infrequently when communicating with each other.

The clinician visited one class of which Case No. 1, with only 21% hearing loss, was a member, and found her signing to the teacher. Several of the cases to whom the speech training was given reported that they talked only during the speech period so that it was necessary to take them from a more or less silent world of vocal inactivity into a new world of speech sounds to which they attended, and in which they spoke and could hear their own speech.

A high fidelity amplifier designed and made by Dr. Scott N. Reger of the University of Iowa was used. The microphone was placed on a small table. The clinician sat on one side of the table and the pupil on the opposite side with the microphone between them. Each was about a foot away from the microphone. The intensity was controlled by the pupil according to his own needs. One of the important factors in the training was the pupil's hearing of his own voice and speech, as well as that of the clinician.

Occasionally a small group met just for a social period during which the clinician gave some auditory stimulation by simply talking about affairs in school, their work, amusements—anything that would interest the pupils and provoke speech. The instruction proper, however, was all given individually.

In eight of the ten cases studied it was rather difficult to motivate speech work, simply because there was no real, felt need. The post graduate in the group lived outside of the school and was, of course, in a world in which speech was vastly important, and one of the boys, who was consistently an A pupil, and talked much more than the others, was anxious and eager for speech. For the other eight cases, there was no immediate felt need for it. So the problem of motivation was a real one.

Four individual periods of 40 minutes each were given each week to each of the ten cases over a period of three months. There were occasional interrruptions because of holidays, special programs, and illnesses. But there were also special training periods given which more than made up the lost time.

The first two or three minutes after the pupil put on the head phones there was the ordinary small talk about the weather, the pupil's health, etc. Then the more formal training was begun. The sentence was the unit with which the training began and the clinician read it several times in an ordinary conversational tone. Then the pupil read it. Obviously from the diagnostic summary there were many things to be corrected, but in the first few weeks of training only *one* sound was attempted during a period. If the position of the speech agents was obviously wrong, that was pointed out visually, as one would do in dealing with a hearing case. But far more often the speech agents seemed to be doing exactly the right thing, and yet the resultant sound was not the desired one. For example, the most detailed and careful description of the position of the blade of the tongue articulating against the teeth ridge, so that a *very* small jet of air is emitted, etc., etc.; and this description in the simplest words, aided by diagrams, would often produce a sound not recognizable as an attempt at an *s* sound. It was the hearing of the *s* sound that was most essential in the production of it. It is obvious that the eye helps the ear, or that the association of sense organs produces a more effective impression than one sense organ can produce independently, but the auditory image seemed of infinitely more value in

producing a sound correctly than all the others combined. And so it was auditory stimulation that was given, first the sentence, then the word, and lastly the syllable (which was used in exercises).

After the first few weeks of training, in which the clinician's speech and voice were the elements emphasized, the pupil was then urged to listen very carefully to his own voice (during the training period) and when a sound was corrected it was repeated in drills in the effort to establish the feel of the correct sound, because the larger number of these cases can not hear their speech sufficiently when it is not amplified to know whether they are speaking a sound correctly or not. (It is difficult, I think, for us with normal hearing to construct imaginatively the situation of the deafened individual speaking into a void, hearing nothing, or only part of the sounds he is producing.)

The tension was relieved in these training periods on correcting the speech sounds by little exercises emphasizing pitch change, inflection, phrasing, rhythm, etc., according to the most outstanding needs of the case. Frequently, as a change from the intense concentration required for hearing and correcting a speech sound, the clinician read very simple material and the pupil read the face as well as heard the speech.

In some cases those who had made rather marked progress in correcting the speech defects listened to their speech with the amplifier and corrected their own mistakes, in so far as they were able. This procedure was rather effective in making them keenly attentive and developing the responsibility for being their own teachers.

Many tongue and lip exercises were used, but as far as possible the exercises for attaining glibness and ease in manipulation of speech agents, which these cases so much needed, were incorporated into sentences that had real content. It should be explained here that these cases are very sensitive to anything that to them suggests the infantile. Personality quirks and difficulties are much more numerous and complicated among the hard of hearing than among those with normal hearing and one of their obsessions is

that they may appear, in their own terminology, "babyish." The result is that one is constantly confronted with the problem of being "simple" in a "profound" manner. Again let me reiterate that although visual and tactile aids were used as supplementary, it was the auditory image, the hearing of the desired sound, that was the keynote of the therapy employed.

This summary of the therapy used suffers in the way that most summaries do, in that it makes the procedure sound infinitely more simple than was actually the case.

And now for the results of this training. And here again it is necessary to summarize in so far as that is possible.

There was a very obvious development of spontaneous speech and an enlargement of the speaking vocabulary in eight of the ten cases. There was general improvement in sentence structure and in spontaneous speech, and a marked improvement in phrasing, and accent in the word in oral reading in eight of the ten cases.

Nasality, which occurred in five of the cases, was little affected by the training. The harshness and tightness in the voice in Case No. 8 were improved. The voice still becomes rather husky after being used for a prolonged period. The weak, muffled, mono-pitch voice in Case No. 9 was changed by the training. The voice has more intensity now and there are some pitch changes. The voice cracks. It is much more unpleasant to listen to than before the training. The defective vowel sounds have been little affected by the training. The defective consonants have yielded to the therapy rather effectively. Cases No. 1 and 2 presenting the fewer consonantal difficulties were completely corrected. Case No. 8, with the hearing loss of 53%, can now make all the sounds perfectly, but he needs much practice to attain ease in pronunciation. Case No. 3 has corrected only 3 of her 10 defective sounds. Cases 4, 5 and 6 can now make all the consonantal sounds correctly with the exception of the *z* sound, which is still not corrected in Case 4. (It should not be inferred that the perfected sound has yet become entirely habitual, but that they can be, and are, made correctly when the subjects are attending to their speech.) Case 7, as before

stated, seems to have made no consistent change as a result of the training. Case No. 9 has improved 6 of her 10 defective sounds. (The *z* sound is one unaffected by training.) Case No. 10 has corrected her defective consonants.

As for generalizations to be made from this study there are none. There were not a sufficient number of cases and the training period did not continue over a long enough period to permit one to generalize. But one may say that in these particular cases the improvement in the intelligibility of the spech, as well as the increase in the amount and facility of its use, has amply justified the time and effort expended in training.

Miscellaneous

I. S. F.

The Seventeenth Regular Meeting of the Conference.—After a three-weeks postponement due to the severity of flood conditions, the Conference of Executives of American Schools for the Deaf met in Pittsburgh, Pa., in its Seventeenth Regular Meeting, Tuesday April 21 through Friday April 24, on the invitation of the Western Pennsylvania School for the Deaf. The meeting was a profitable one in every respect. The attendance was both large and enthusiastic, members coming from distant parts of the United States and Canada. The program covered a series of constructive questions, and matters of much importance to the profession were decided.

In addition to the regular program the members enjoyed a visit of inspection through the Western Pennsylvania School with all the school activities in operation, a banquet as guests of the board of directors of the school, and a sightseeing trip through the city of Pittsburgh arranged by the school management. The school also entertained the members at luncheon on each day of the sessions, and in every other way was lavish in its efforts to make the stay of the members a pleasant one. Superintendent and Mrs. A. C. Manning were ideal hosts and the preparations they made for the convenience and entertainment of the Conference accounted in large measure for its success.

The deliberations of the Conference were ably conducted by its president, Dr. J. W. Blattner of Oklahoma, and the sessions were marked by both cordiality and earnestness. The general trend of the discussions took the line that the most effective administration of a school is one that assures the child as a physically and mentally happy social individual, thus making for the ideal learning situation.

The broad general aspects of education were furnished in a series of three remarkable addresses by persons of prominence in Pittsburgh, namely, a talk on the evening of

the opening session by Dr. John G. Bowman, chancellor of the University of Pittsburgh; a penetrating analysis of the question of Character Development, by Dr. William T. Root, Jr., dean of the Graduate School of the University of Pittsburgh; and an address by Judge Sara M. Soffel of Pittsburgh.

A matter of moment effected by the Conference was the decision to omit special reference to definitions and classification of methods of instruction employed in American and Canadian schools for the deaf as annually reported in the January statistics of the ANNALS. The emphasis hereafter is to be on the thought that the work is done by *schools*, not by methods. Another matter of importance was the appointment of a special committee to prepare an authorized outline of definitions of deafness and its deviations.

The new officers of the Conference elected at its business session to serve for the ensuing three years are

President—Supt. Frank M. Driggs, Utah
Vice-President—Mrs. H. T. Poore, Tennessee
Secretary—Supt. Leonard M. Elstad, Minnesota

A full report of the proceedings will appear later in the ANNALS.

The New Executive Committee of the Conference.—By vote in business session at its Pittsburgh meeting, the Conference of Executives of American Schools for the Deaf decided upon the following members to comprise its Executive Committee, with terms of office as indicated:

Dr. Percival Hall, to 1939
Mr. Madison J. Lee, to 1939
Dr. Ignatius Bjorlee, to 1942
Mr. Alvin E. Pope, to 1942
Mr. Elwood A. Stevenson, to 1945
Dr. Clarence J. Settles, to 1945

Upon organization of the Executive Committee, Dr. Hall was continued as chairman. The president of the Conference, Superintendent Driggs, is also a member of the committee in *ex officio* capacity.

The Reaction of Unborn Babies to Sound.—By the courtesy of the Associated Press, it is possible to give here a statement relating to the likelihood that babies hear sounds

at least four months prior to birth. This statement was prepared by Mr. Howard W. Blakeslee, science editor of that organization, and released April 19 as an Associated Press dispatch from Yellow Springs, Ohio.

Unborn babies hear sounds for the last four months before birth, and noises which do not disturb their mothers may speed the infants' heart rates 14 beats a minute.

These discoveries, startling because some physiologists have doubted that even a newborn baby hears, and because they indicate that environment may begin its molding influence before birth in ways not hitherto considered, is reported by Dr. L. W. Sontag and Dr. Wallace of Antioch College.

Their work was done for the Samuel S. Fels Fund Clinic and described in the *American Journal of Diseases of Children* and in the *Journal of Child Development*.

"These responses," the report states, "are of two kinds; sharp movements of the arms and legs, and an increase in rate of heartbeat. Both responses can be obtained for the first time during the fourth month before birth. At that time they are slight and their occurrence is unreliable."

The sounds were made by a doorbell buzzer beating against a piece of wood. The wood was placed on the mother's abdomen over the position of the child's head.

"While the experiment did not prove," the report states, "that it was the auditory mechanism through which the sound was perceived, the fact that responses of both movement and heart resulted only when the sounding board was placed over the fetal head would point to this conclusion."

The responses increase from the fifth month, until in the last two weeks before birth the child responds strongly to sound in more than 90 per cent of instances.

"The heart 'speed-up'," the report says, "begins almost instantly after the sound is applied and reaches its peak within a few seconds, then gradually falls off. The average increase in rate in the last month was 14.3 beats per minute plus or minus .73 of a beat. There is no accompanying increase in the mother's heart rate.

"The physiology involved is not definitely known. It may be the same reaction by which fear or excitement produces heart rate in adults and by which infants respond to a loud noise by a convulsive movement and by a rise in the heart beat. In both these instances the increased heart rate results from increased activity of the sympathetic nervous system.

"These experiments emphasize the fact that human environment becomes a significant factor not at birth, but at least several months before. Apparently the unborn child is not so completely isolated from its environment as has been generally supposed. There may very well be other environmental factors in addition to sound to which the unborn is sensitive."

Dr. Sontag added that it is possible further study of the time of appearance and nature of these sound responses may provide a tool for testing the degree of development of certain portions of the nervous system before birth.

Sixtieth Anniversary of the Companion.—The Minnesota School *Companion* celebrated in March the sixtieth anni-

versary of its existence. Appearing originally with its first number on March 1, 1876 as *The Gopher*, it has remained continuously one of the outstanding journals among our schools for the deaf. Its career has been an impressive one, marked by a sound view of the problems particular to the education of the deaf and by an editorial policy that has always been a tolerant one. Its success reflects largely the guidance of Dr. James L. Smith, who for more than fifty years as its editor directed its activities.

The fine influence of the *Companion* is well described in this paragraph of an article by Superintendent Elstad in the Sixtieth Anniversary Number, March 19, 1936:

> Recently one evening I had occasion to walk into the office of a school superintendent in a neighboring village. One of the first things I saw was a copy of the *Companion*. I made the remark, "I see you go in for good reading, Mr. ———." His answer was, "Yes sir, and if I don't give the primary teacher the page for children there is trouble." Needless to say this was interesting and pleasing. It shows that the *Companion* is read by the schools in our district who get it. This fact encourages us to believe that our school is slowly but surely becoming known as a part of the whole school structure in the state, and our pupils in the same way are being considered a real part of the whole school family. I feel the *Companion* does a real part in the task of acquainting the public with the fact that we are a school that educates and not an institution that segregates or isolates. The *Companion* has been planting this good seed for a period of sixty years. The harvest is now a certain thing.

Another Book by Miss Whitehead.—Another of the delightfully quaint stories by Miss Kate Whitehead, deaf writer of London, has just made its appearance. This time it is "Kellyann Married," a sequel to "Kellyann, the Story of a Manx Cat, by Herself." Miss Whitehead, the wife of Mr. Selwyn Oxley, prominent English missionary to the deaf, gained unusual interest for her series of books in historical fiction in which deaf persons are important figures, namely "The King's Legacy" (The Sheldon Press, London) and "For Prince Charlie" (The Epworth Press, London, 3/6). Miss Whitehead has since turned her talent to interpreting animal life, a task she performs with delicate and appealing charm. This latter series includes "Stubby, the Story of a Cat, Told by Himself" (3/6 net), "More About Stubby, by Himself" (3/6 net), "Kellyann, The Story of a Manx Cat, by Herself" (2/6 net), and now "Kellyann Mar-

ried" (2/6 net), all published by the Epworth Press, 25-35 City Road, E.C. 1, London, England.

Financial Report of the Convention.—Mr. Odie W. Underhill, treasurer of the Convention of American Instructors of the Deaf, has submitted his financial report as of March 28, 1936. It gives evidence of a vigorous growth in membership, due largely to the efforts of the president of the Convention, Dr. Harris Taylor.

With the approval of President Taylor, Mr. Underhill's report is given here.

March 28, 1936

STATEMENT OF THE CONVENTION TREASURY

Receipts

Balance on hand June 12, 1935 as reported to Convention at Jacksonville, Ill.		$ 422.19
Received of Membership fees:		
914 members @ $1.00	$914.00	
25 members @ 2.00	50.00	
1 member @ 1.05	1.05	
1 member @ 1.15	1.15	
	$966.20	
Received of Interest on Savings Account	4.50	970.70
Total receipts		$1,392.89

Expenditures

June 19—Paid Prof. W. L. Hunter (Speaker on program)	$ 30.00	
June 19—Paid Prof. A. F. Siepert (Speaker on program)	20.00	
July 15—Paid D. Taylor (For telegrams)	1.98	
Oct. 1—Paid K. A. Dorman (For reporting proceedings)	235.00	
Nov. 20—Paid V. O. Skyberg (For express charges)	14.60	
Nov. 23—Paid A. E. Pope (For traveling expenses)	142.08	
Jan. 27—Paid Dr. H. Taylor (For office expenses)	24.74	
Feb. 5—Paid insurance company (For treasurer's bond)	5.00	
Feb. 15—Paid Southern Engraving Company (For line cut)	5.24	
Total expenditures		$ 478.64
Balance March 28, 1936		$ 914.25

Respectfully submitted,

O. W. UNDERHILL, *Treasurer*

The Teletactor.—The American Association for the Advancement of Science, at its recent meeting in St. Louis, made a grant to The American Institute for the Deaf-Blind for use by Prof. Robert H. Gault as follows: "For designing and construction of the amplifying and receiving units in the Teletactor and to bring the whole apparatus up to certain requirements."

Correction in Fiscal Report.—In that part of the tabular statement in the last January ANNALS which gave financial data for the public residential schools, the Indiana School was erroneously reported with an expenditure for the previous fiscal year of $54,969 for support and $5,579 for buildings and grounds. The school had an enrollment of 428 pupils (October 20, 1935), and obviously the above sums for expenditure could not be correct. According to the Ninety-second Annual Report of the school, for the fiscal year ending June 30, 1935, the amounts expended during that period were $147,933.94. The annual report also lists the per capita expenditures as $342.05, the number of employees as 114, and the number of pupils per employee as 3.8.

Certification of Teachers.—A number of additional applications for certification by the Conference of Executives of American Schools for the Deaf have been received since the last report in the March ANNALS, and the following names are to be added to those already published:

Edmund Burke Boatner, American School
Mrs. Hugh T. Brassell, Portales, N.M.
Janice Breitwieser, Lexington School
Clara Evangeline Elliott, Rhode Island School
Edward S. Foltz, Kansas School
Mabel Hannah Gray, Clarke School
Truman L. Ingle, Missouri School
Geneva B. Llewellyn, Wisconsin School
Marie Clarke Lloyd, North Dakota School
Margaret McNamee, St. Joseph's School, N.Y.
Helen Haight Parks, Baton Rouge, La.
Anita M. Uhl, Oregon School

The Optimism of a Deaf Person.—"I Am Glad I Am

Deaf" is the cheerful title of an article in the *American Mercury,* April 1936, by Mr. Arthur G. Leisman, president of the Wisconsin State Association for the Deaf. Mr. Leisman, totally deaf for 35 years since the age of five, finds his contentment derived from a number of facts. He is spared the racking strain of the fury and chaos engendered by the noises of life. For him the world of silence has generated a serenity that has become his greatest possession. This tranquility of spirit has developed in him a desire to be of assistance to other deaf persons, in whose companionship he finds great comfort. The sign language affords him a means of communication that is "simple, unbelievably effective and startlingly beautiful at times. . . ." For the pleasures and social activities from which his deafness bars him he has found substitute diversions equally satisfying, particularly automobile trips, hunting and fishing, sports events, social gatherings among the deaf, books, and writing. So contented is he with the blessings of a silent life that he would be unwilling to surrender his deafness for hearing could the exchange be made.

Convention of Teachers of the Deaf in India.—The proceedings of the first meeting of the newly organized Convention of the Teachers of the Deaf in India, held at Calcutta, April 19-22, 1935, have just been received. A good deal of the effort in organizing this convention may be credited to Mr. S. N. Banerji, a graduate of the Normal Department of Gallaudet College (1923), who had the opportunity to observe the Convention of American Instructors of the Deaf in action at its meeting at Belleville, Ontario, in 1923. With delegates attending from distant parts of India, the meeting effected formal organization with the election of officers, the framing and adoption of a constitution, the reading of papers and the adoption of resolutions.

Among the major objectives of the convention are the following:

1. To promote public interest in the cause of the deaf by lectures and publishing of periodicals.
2. To put forward the claim of the deaf for compulsory education up to the age of sixteen.

3. To start a propaganda in and without the Legislature to amend the most inequitable Hindu Law regarding inheritance by the deaf.
4. To promote public sympathy for the gradual rehabilitation of the deaf.

The enormity of the task before the society may be judged from the fact that the deaf population of India is estimated to be at least 225,000 (Census of 1931), and that only about 900 of these are enrolled in the 25 schools scattered throughout the country. A severe limitation imposed upon the deaf is that by law they are unable to inherit parental property.

Papers given at the meeting dealt with such topics as these: Touch and Its Bearing on the Teaching of the Deaf (by C. L. Bhattacherjee); Stray Thoughts on the Problem of the Deaf-Mute (by Manmatha N. Banerji, lecturer on psychology, Calcutta University); Industrial Training of the Deaf (by K. L. Sinha); and The Present Educational Condition of the Deaf-Mutes in India (K. D. Bhattacherjee).

Teacher of the Deaf Honored.—Chosen from among candidates in Girl Scout work in all parts of the country, Miss Clara Hamel, instructor of English in the advanced department of the Rochester School, sailed March 18 for England to attend an International Extension Training conference at Bedford College in London. Miss Hamel, captain of the Girl Scout Troop of the Rochester School, was the only representative from the United States in the work with the deaf. The conference lasted from March 27 to April 3, but by the wish of the board of trustees of the Rochester School Miss Hamel remained in England almost three weeks for observational study of schools for the deaf there. She was selected by the Girl Scout organization on the basis of her training, and her Girl Scout interest and activity.

Personality Study of Hard-of-Hearing Children.—A personality survey of 2,000 children with defects of hearing, in more than 50 elementary schools in the city of New York, was recently undertaken by Dr. Rudolf Pintner of Teachers College, Columbia University, with the help of a corps of assistants working under a WPA grant. The results obtained from this extensive study of hard-of-hearing children are

summarized in this item in the *New York Times,* April 13, 1936:

> Children who are hard of hearing, Dr. Pintner said, are more introverted, more subject to fears and less well-adjusted emotionally than pupils with normal hearing. A more detailed study will be made, he revealed, to discover what effect different degrees of deafness have on the personality.
>
> When the analysis is completed a program of training to enable partly deaf pupils to adjust themselves more favorably to their environment will be undertaken, he added. Information obtained will be submitted to the principals for use by teachers in meeting the special problems of the pupils.

Education of Handicapped Children as Distinguished from Vocational Rehabilitation and the Social Security Act.—A statement of policy differentiating between education of handicapped children on the one hand and vocational rehabilitation and the provisions of the recently enacted Social Security Act is announced by U. S. Commissioner of Education J. W. Studebaker, in *School Life,* March 1936, as follows:

> Increasing interest in the education of handicapped children, probably stimulated through the implications of recent social legislation, has precipitated numerous inquiries regarding state organization for the education of exceptional children within state departments of education, with some reference to its relationship to vocational rehabilitation and to the Social Security Act. State administrators working on this problem will find in certain Office of Education publications suggestions for consideration.
>
> Briefly stated, the policy which this office recommends, after careful consideration of the various points of view, emphasizes the following factors:
>
> *First:* That the education of exceptional children should not be confused with vocational rehabilitation. The former is a program for children, the latter is a program for adults and young people of employable age. The former concerns education in its entirety, the latter concerns only education as vocational adjustment. The former deals with physical handicaps, mental handicaps, behavior problems, and intellectual superiority. The latter deals only with physical handicaps. Both are important in making complete provisions for physically handicapped persons.
>
> *Second:* That, according to the provisions of the Federal Vocational Rehabilitation Act, "no portion of the appropriations authorized by this act shall be used by any institution for handicapped persons except for vocational rehabilitation." This precludes its use for the education of exceptional children or for the supervision of such education.
>
> *Third:* That, according to the provisions of the Social Security Act, no portion of the appropriations authorized by this act may be used for the education of exceptional children or for the supervision of such education. This is in accordance with statements made publicly by representatives of the Children's Bureau.

Fourth: That, since the education of exceptional children begins with the kindergarten (or earlier) and extends at least through all the elementary grades, it should be under the supervision of someone who by training and experience is thoroughly familiar with the principles and methods of elementary education and with their particular adaptations to the needs of various groups of exceptional children.

Fifth: That, since vocational rehabilitation is primarily concerned with the vocational adjustment of handicapped persons of employable age, it should be supervised by someone who is familiar with the principles of educational guidance, with special training and experience in methods of case work, vocational counseling, vocational training, and placement.

Sixth: That, in view of the above, the education of exceptional children and vocational rehabilitation should be carried on as two distinct but co-ordinated activities of the state department of education, each under the direction of a qualified person.

The Office of Education stands ready at any time to advise with you in the development of your program.

Change in Iowa Day-Schools.—A day-school for deaf children was opened at Webster City, Iowa, last fall, with Mrs. Myrtle Long Henderson teacher in charge. The Dubuque Day-School has been discontinued since September, 1934.

Newer-Type School Report Cards.—A memorandum released by the Department of the Interior summarizes a study of school report cards made recently by Dr. Mary D. Davis of the Federal Office of Education. The report card, so the tendency shows, is undergoing modernization; that is, it is made to reflect the newer principles of education taking vogue. The report cards of today are larger in size than those used prior to 1930. They provide more space for the comments of teachers, and contain more explanatory material. The report card is also supplemented by diagnostic records, and letters of explanation to the parents. As a rule, too, the familiar numerical-rating symbols have been supplanted by symbols or terms designating degrees of success in the pupils' work.

The Occupational Index.—The National Occupational Conference, with offices at 551 Fifth Avenue, New York City, announces the publication of the *Occupational Index,* "a continuous monthly bibliographical listing of occupational information in current books, pamphlets, and periodicals, annotated and classified." This publication should

prove of great value to all interested in vocational guidance and vocational education. We are pleased to note the ANNALS has been selected as one of the magazines from which references will be chosen. With the aid of a grant from the Carnegie Corporation of New York, the National Occupational Conference will publish the *Occupational Index* for an experimental period of one year at $5.00 per subscription. The issue for January 1936 is its initial number.

Changes in the Lexington School.—At a meeting of the board of trustees on April 8, the title of the head of the school was changed from Principal to Superintendent. Miss Mildred A. Groht was named Principal of the Academic Department, Mrs. Adelaide P. Wheeler was appointed Head Teacher of the Academic Department, and Mrs. Ruth L. Gahman was appointed Principal of the Vocational Department.

The Work of the Texas School.—Miss Edith Fitzgerald, noted exponent of Straight Language in teaching language to deaf children, has, since her connection with the Texas School the past three years, held the position of Supervisor of Language throughout the school. In addition to giving lectures on Straight Language, and training several teachers in her methods, she has recently taken over the supervision of language work in the vocational department where she is giving the instructors her course for vocational teachers.

The Texas School has a separate and distinct unit for pure-oral work which covers all phases of academic training from beginners to graduates, separate and apart from the mixed oral and manual classes. All of this work is under the personal supervision of Miss Sudie Hancock who is designated Principal of the Oral School.

Reports of Schools.—Acknowledgment is made of the receipt of the following reports:

Ninety-second Annual Report of the Indiana State School for the Deaf, for the fiscal year ending June 30, 1935.

Fortieth Annual Report of the Montana State School for the Deaf and the Blind and the Montana State Training School for Feeble-Minded, 1934-1935.

Fifty-first Annual Report of the Adult Deaf and Dumb Society of Victoria, Australia, for the year ending March 31, 1935.

Fifth Biennial Report of the California School for the Deaf, for the period ending June 30, 1934.

Report, 1933-1935, the Charles Rogers Mills Memorial, School for the Deaf, Chefoo, China.

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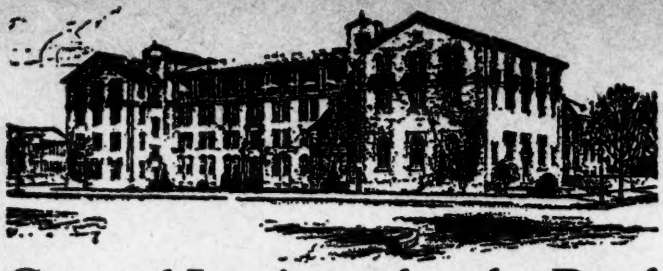

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